

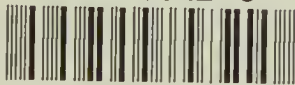
~~B. 4~~ 62 6 az

A
14

KING'S *College* LONDON

Hamilton Library
Observations on the preparation...
1807
RC3M0 RM666.D5 HAM

200826322 5



KING'S COLLEGE LONDON

Dr Vaughan

with compliments

from the

Author





OBSERVATIONS
ON THE
PREPARATION, UTILITY, and ADMINISTRATION
OF THE
DIGITALIS PURPUREA,
OR FOXGLOVE.

"This Medicine may almost be said to be possessed of a Charm for
"allaying inordinate Action of the Heart and Arteries; and in this Point
"of View, as well as for it's Efficacy in some Kinds of Dropsy—
"particularly Hydrothorax—it's Introduction into Medicine is one of
"the greatest Benefits our Science has received in modern Times."

CURRIE'S MEDICAL REPORTS, vol. 2d, p. 419.

K.C.L.
J. D.

A
14

OBSERVATIONS
ON THE
PREPARATION, UTILITY, and ADMINISTRATION
OF THE
DIGITALIS PURPUREA,
OR FOXGLOVE,
IN DROPSY OF THE CHEST, CONSUMPTION,
HEMORRHAGE, SCARLET FEVER, MEASLES, &c.
INCLUDING A SKETCH OF THE
MEDICAL HISTORY OF THIS PLANT,
AND AN ACCOUNT OF THE OPINIONS OF THOSE
AUTHORS WHO HAVE WRITTEN UPON IT,
DURING THE LAST THIRTY YEARS.

— ❦ —
By WILLIAM HAMILTON, M. D.
PHYSICIAN, BURY ST. EDMUND'S, SUFFOLK.

— ❦ —
ILLUSTRATED BY CASES.

LONDON:
PRINTED FOR LONGMAN, HURST, REES, AND ORME,
PATERNOSTER-ROW.
1807.

LIBRARY OF THE

UNIVERSITY OF CHICAGO

LIBRARY OF THE
UNIVERSITY OF CHICAGO



LIBRARY OF THE
UNIVERSITY OF CHICAGO

LIBRARY OF THE
UNIVERSITY OF CHICAGO

TO MATTHEW BAILLIE,

M. D. F. R. S. &c.

Dear Sir,

BY inscribing the following Observations to you, I should only signify the sentiments of respect and esteem with which every one must be impressed, who has had an opportunity of witnessing the candour and liberality of your professional conduct.

But I must acknowledge that I am actuated by another and less ~~dis~~interested motive; and that, whilst I solicit your sanction of my endeavours to exhibit what, I trust, you will find a faithful view of one of our most efficacious remedies, I am not insensible to the hope of obtaining, by the influence of your name, a degree of attention to my little work beyond any claim I can advance, independent of the importance of it's subject.

I am,

Dear Sir,

Your most obliged and

Most faithful Servant,

WILLIAM HAMILTON.

Bury, August 10th, 1807.

ADVERTISEMENT.

THE cases of Hydrothorax contained in the Appendix (No. I.) lately appeared in a Periodical Journal ; but the plan of that work required that they should be reduced within narrow limits, and necessarily precluded the consideration of many subjects connected with a general view of the DIGITALIS.

This is now attempted in a separate and distinct form ; and a Sketch of the Medical History of this powerful plant is prefixed, which, it is hoped, will not be found without general interest ; while, to the younger Practitioner it may convey some information, and prevent the necessity of consulting many scattered publications.

In this volume the cases are confined to Hydrothorax ; and these would have been

more numerous, had the Author not been restrained from narrating some interesting examples of this disorder, which have lately occurred; and in which the FOXGLOVE completely succeeded.—Confidence in the perfect accuracy of Medical Reports cannot be demanded, if the name and residence of the patient, or of the Practitioner concerned in his treatment, is withheld. In private practice this evidence cannot always be adduced, without the risque of injuring the feelings of individuals; more especially if it is probable that they may be wantonly exposed before the public at large, to gratify the local ends of a captious hypercritic; in every other point of view impotent; and in regard to science, entirely unworthy of notice. The silence thus imposed upon the Author has also deprived his readers of a most interesting and instructive case of Consumption, from the repeated attacks of which his patient, contrary to the opinion of the first Physicians, has been restored to perfect health by the use of DIGITALIS.

The cases and observations in the Appendix (No. II.) furnished by Dr. MACLEAN, of Sudbury, will be found highly valuable on their own account. To the Author of this volume they are peculiarly gratifying, inso-much as they confirm the opinions and conclusions drawn from his own experience: And they are calculated to prove of very superior advantage to his readers, by exhibiting a mode of practice in Hydrothorax, somewhat different from that which he has had occasion to adopt, and which may be resorted to, should his more simple plan of treatment be found inefficacious. These observations, added to those given at page 91 et seq. upon the “Exhibition of DIGITALIS,” will, it is hoped, leave the reader little room to wish for any addition to the directions for the administration of diuretics.

To his friend Dr. MACLEAN the Author begs to offer his best thanks for these excellent cases and observations; and he trusts that he will soon find leisure to complete his in-

tended work on Hydrothorax ; which, he ventures to assert, will prove a most acceptable present to the Faculty.

How far, and after what manner, the Author has fulfilled the task he had imposed upon himself, remains for the determination of others. The facts stated, and the opinions formed, are founded upon experience alone ; and, if he shall prove sufficiently fortunate to excite the attention of Medical Men to a sober, guarded, and effective use of the DIGITALIS, in those diseases to the cure of which it's powers are adapted, he, therefore, confidently expects that it will be found fully to justify what he has advanced in it's favour.

CONTENTS.

	PAGE
INTRODUCTORY Observations	1
Sketch of the Medical History of the DIGITALIS	21
Of the Cultivation and Preparation of DIGITALIS ..	77
Of the Exhibition of DIGITALIS, with Practical	
Precautions and Observations	84
Of the Utility of DIGITALIS in Hydrothorax, and	
other Effusions of Water into the Cavities of	
the Chest	109
Of the Utility of DIGITALIS in Phthisis Pulmonalis	135
————— Hemorrhage.....	150
————— Scarlatina	152
Of the Efficacy of DIGITALIS in Measles.....	154
Appendix, No. I. Case 1	160
————— 2	162
————— 3	164
————— 4	168
————— 5	170
————— 6	174
Observations on the foregoing Cases, and Objections	
answered.....	177
Appendix, No. II. (containing Observations on	
DIGITALIS, and Cases of Hydrothorax, in a	
Letter from Dr. MACLEAN, of Sudbury)	185
Case 7	189
———— 8	195
———— 9	199
———— 10	204

APPENDIX

1. The first part of the Appendix contains a list of the names of the persons who have been elected to the office of President of the United States since the year 1789.
2. The second part contains a list of the names of the persons who have been elected to the office of Vice-President of the United States since the year 1789.
3. The third part contains a list of the names of the persons who have been elected to the office of Senator of the United States since the year 1789.
4. The fourth part contains a list of the names of the persons who have been elected to the office of Representative of the United States since the year 1789.
5. The fifth part contains a list of the names of the persons who have been elected to the office of Member of the House of Representatives of the United States since the year 1789.
6. The sixth part contains a list of the names of the persons who have been elected to the office of Member of the Senate of the United States since the year 1789.
7. The seventh part contains a list of the names of the persons who have been elected to the office of Member of the House of Representatives of the United States since the year 1789.
8. The eighth part contains a list of the names of the persons who have been elected to the office of Member of the Senate of the United States since the year 1789.
9. The ninth part contains a list of the names of the persons who have been elected to the office of Member of the House of Representatives of the United States since the year 1789.
10. The tenth part contains a list of the names of the persons who have been elected to the office of Member of the Senate of the United States since the year 1789.
11. The eleventh part contains a list of the names of the persons who have been elected to the office of Member of the House of Representatives of the United States since the year 1789.
12. The twelfth part contains a list of the names of the persons who have been elected to the office of Member of the Senate of the United States since the year 1789.
13. The thirteenth part contains a list of the names of the persons who have been elected to the office of Member of the House of Representatives of the United States since the year 1789.
14. The fourteenth part contains a list of the names of the persons who have been elected to the office of Member of the Senate of the United States since the year 1789.
15. The fifteenth part contains a list of the names of the persons who have been elected to the office of Member of the House of Representatives of the United States since the year 1789.
16. The sixteenth part contains a list of the names of the persons who have been elected to the office of Member of the Senate of the United States since the year 1789.
17. The seventeenth part contains a list of the names of the persons who have been elected to the office of Member of the House of Representatives of the United States since the year 1789.
18. The eighteenth part contains a list of the names of the persons who have been elected to the office of Member of the Senate of the United States since the year 1789.
19. The nineteenth part contains a list of the names of the persons who have been elected to the office of Member of the House of Representatives of the United States since the year 1789.
20. The twentieth part contains a list of the names of the persons who have been elected to the office of Member of the Senate of the United States since the year 1789.

ON THE
UTILITY AND ADMINISTRATION
OF
DIGITALIS,
&c. &c.

Introductory Observations.

THE History of the Materia Medica affords abundant examples of the temporary celebrity, and subsequent neglect, of many of it's articles: nor is this fact difficult of explanation. The hopes of improving our art, and of affording relief to the afflicted, together with the love of novelty, have at all times disposed physicians readily to admit new remedies; and they have generally had little room to complain of their reception. Stamped with the partial characters of their discoverers, or early patrons, they have at once been received

into use ; and their pretensions were not decided upon, till after a full and complete trial of their virtues and qualities. But this candid examination few of them were found able to undergo. They often proved altogether inert, or at best unequal to effect the purposes for which they were intended ; and they were consequently either discarded from practice entirely, and suffered to continue to swell the lists of obsolete and ineffective drugs, or still only resorted to occasionally as auxiliaries to more powerful agents. Many of them indeed have again been offered to notice, with a revived account of their powers over the diseases in which they were originally recommended, or for some new and, till then supposed, undiscovered uses. A repetition, however, of the circumstances that attended their first introduction, or their own demerits, again consigned them to oblivion*.

* Is it yet premature to adduce as examples the renewed use of *Taraxacum* in supposed Schirrhous of the Viscera, and of *Lichen Islandicus*, and *Uva Ursi*, in Consumption ?

It is greatly to be wished that the eminent bodics appointed to regulate our Pharmacopœias would deign to take this important subject into their consideration. The really efficacious and useful medicines to be found in the extensive lists that at present form the *Materia Medica*, might probably be comprised within a comparatively narrow space; and as simplicity in prescription is fortunately now become common, it would in a great degree facilitate the study of this important branch of medicine, were the superabundant articles expunged.

To these observations, the Medical History of the *DIGITALIS* will form some exception. It has indeed been sufficiently commended, and even extravagantly praised; and to the high-wrought encomiums that have been lavished upon it at various times, no doubt much of it's temporary loss of fame and neglect has been owing. But it had, in it's progress to the important station among the means of curing diseases that it is entitled to occupy, more

serious obstacles to encounter than its failure to realize the hopes of its admirers. For with powers sufficient to cause highly dangerous effects when injudiciously administered, it was for the most part given in a state of preparation that rendered it entirely inert. It was consequently often found ineffective, whilst it sometimes produced violent symptoms; and its exact management being little understood, and the directions for its preparation and use not duly attended to by many who prescribed it, there is no room for surprise that to some it became an object of terror, and to others of indifference; or, that the few who had carefully observed its administration and effects, should be delighted with the powers which it is often found capable of exerting.

Thus it appears, as is observed by Sir GEO. BAKER, "that the fortune of Foxglove in the
"medical world has been various. At one
"time it has been esteemed to be a powerful
"remedy: at another time it has been utterly

“ rejected as a plant, totâ substantiâ venenosâ.
“ It is probable that a few fortunate experi-
“ ments might bring it into a temporary
“ vogue ; and it is as probable that other ex-
“ periments less fortunate might afford a
“ sufficient foundation for it's disuse*.” In-
deed the difference of opinion entertained by
Medical Authors and Practitioners upon this
subject, is altogether extraordinary : and can
only be accounted for, by supposing that much
attention cannot have been paid to procuring
the plant in a state always possessing equal
powers—to a want of accurate observation of
it's effects—or, to it's having been frequently
given in diseases altogether unadapted to it's
use.

In order to obviate the difficulties that
must follow the exhibition of this powerful
medicine in an unequal degree of strength,

* Appendix to Dr. DARWIN's Paper on the successful
use of Foxglove. Medical Transactions of the College of
Physicians, vol. 3d, page 301.

Dr. WITHERING directed the leaves to be gathered and carefully dried, when the flower stem had shot up; and when they might invariably be depended upon to produce the same effects. The leaves thus collected were given in powder, or an infusion was made from them; and to Dr. DARWIN we are indebted for the saturated tincture,—a mode of preparation highly advantageous, when powerful remedies are required. These forms are fully adequate to the attainment of every advantage that can be expected from the use of this plant.

Dr. WITHERING's directions seem, however, not to have been attended to, even in the first trials that were made of the DIGITALIS. He complains of the unrestrained manner in which it was exhibited at Edinburgh, previous to its admission into their Pharmacopœia in 1783; and, of the enormous doses in which it was directed in London. I conceive this inaccuracy to have been occasioned by want of attention to its preparation.

The DIGITALIS cannot be given in *enormous* doses with impunity, if it retains activity: and, in this state, a little experience would have taught the Edinburgh and London Physicians it's proper management. It may, therefore, be presumed that they employed (as is commonly done at a distance from the districts where this plant is naturally produced) leaves possessed of very inferior power; and which are, notwithstanding what has been written upon this subject, usually obtained from the druggists in bundles, tied up together when green, and become mouldy. Those who expect any benefit from such preparations will find themselves entirely disappointed*.

* “ When I first entered upon the use of the plant [the DIGITALIS] in Consumption, I did not even entertain a hope that it would afford relief. I disbelieved it's efficacy; and the issue of the first cases in which I prescribed it, confirmed my scepticism. My patients perished! The failure I now ascribe to the circumstance of the plant being of a bad quality, since it's prominent effects were never apparent. Indeed I have the strongest conviction, that a want of due attention to the *quality* of the DIGITALIS, and to the *quantity* ad-

To this it may be attributed, as well as to the inefficient doses in which it is often given, if it really have power, that many practitioners continue to exhibit DIGITALIS, and to flatter themselves that it is highly beneficial, in cases where it can have no good effect; and that it thus obtains the credit of cures, to which it has no pretensions whatever. It has thus also happened in many cases where I have witnessed the very best effects from this remedy, that I was assured it had previously experienced a full and complete trial.

Some of the most esteemed Authors of the present day have attributed powers to the DIGITALIS, especially over the circulation, far beyond what I apprehend it will be found to possess; and have thus caused it to be resorted to in inflammatory disorders, in which it is desirable to restrain the increased activity of

“ministered, is the principal source of medical disagreement relative to its powers.”

Dr. MOSMAN'S Paper on Consumption,
Medical and Physical Journal, vol. 3d, p. 311.

the vascular system ; as well as in general fever, in which I am informed that it is still frequently employed with this view, and esteemed highly beneficial*.

Of it's supposed influence upon inflammatory diseases, and of it's power in superseding the use of the lancet, I shall hereafter have occasion to treat : In regard to general fever it may here be sufficient to observe, that while the cause producing this disorder continues to act, I apprehend little effect will be obtained in retarding the velocity of the pulse by the use of the DIGITALIS : and, that even were this effect constantly and certainly to be depended upon, it is doubtful whether this alone would suspend the febrile action, or diminish the violence of the other symptoms. Indeed we sometimes see fever pursue it's whole course with but little increase of vascular action ; and I can have no hope that DIGITALIS will do more towards cutting short

* Medical and Physical Journal, vol. 4, page 309.

it's progress, than all the other remedies with which we are acquainted, the affusion of water alone excepted; whilst in such disorders I should greatly fear the injury that might be sustained by the debilitating effects of this medicine:

But although the exhibition of DIGITALIS is often, from it's supposed universal power over the circulation, extended to other diseases in which it's utility may be doubtful; it has for the most part been confined to the relief of dropsical affections, and, of late years, to cases of Consumption. In the former, especially in Hydrothorax and Anasarca, I believe it will be found, when given with due attention, fully deserving the opinion entertained of it above 20 years ago, by Dr. WITHERING; namely, "that it acts more certainly as a
 "diuretic than any other medicine; and that
 "if this fails there is but little chance of any
 "other medicine succeeding*." Yet, the circumstances above alluded to, have even in

* WITHERING on Foxglove, page 191.

these disorders prevented it's being received into general use ; and Hydrothorax has consequently acquired a character of dangerous tendency, which it only deserves when connected with organic disease, or with the general decay of the strength of those afflicted by it.

This is indeed, both by medical men and the public, commonly considered as a disorder in which little can be effected. And if the DIGITALIS, which alone appears to exert decided influence over it, is sometimes given, there is ground for fear that it is seldom pushed to it's proper extent, or persisted in till it's beneficial influence be produced. I am acquainted with no work, of a later date than Dr. WITHERING's, where we find it PARTICULARLY recommended in this species of dropsy, except an excellent paper of Dr. MACLEAN's* ; and few of our latest Authors even mention it. In the mean time the treatment of Hydrothorax is often conducted upon different views ; or perhaps, from the gene-

* Medical and Physical Journal, vol. 4, page 127.

rally received idea of it's danger, less is attempted towards it's cure than in other cases of dropsy: "Since, to pronounce diseases "incurable, is to establish negligence and "carelessness as it were by law*." And thus like many other predictions, the fatal prognostic in this disease is made to work it's own accomplishment†.

That a collection of water in any of the cavities within the chest, must constitute a

* Bacon de Augmentis Scientiarum, S. ix.

† A Gentleman under 40, after suffering severely from Gout, "found his breath become short at night, and his "strength much impaired; and at the end of a fortnight "the breathing became so difficult at going to bed, as to "require his being propped up in a sitting posture every "night.—He now applied for medical aid; when his "pulse being found to be very low, and he exceedingly "weak, and no shortness of breathing taking place in the "day-time, a blister was applied between the shoulders, "and various antispasmodics and expectorants were tried "for a few days without success. He was then bled, and "lost about five ounces of blood, from which he experienced very great relief to his breathing; but, at the "same time, suffered a considerable farther prostration of "strength. In about four or five days, the shortness of "breathing returning to as great a degree as before, it was

disease of great danger, by impeding the action of organs essentially necessary to life, cannot be denied. And it is equally obvious that such a disorder, if not removed, must soon prove fatal. But, that this desirable object may be obtained by the proper use of the DIGITALIS, experience, by which alone I presume to be guided, will not allow me to doubt. For since I adopted the effective use of this medicine in such cases, I have never seen one, however advanced or desperate, that was not speedily relieved by it. Indeed it has, in such distressing instances, appeared possessed of powers infinitely beyond what could have been hoped for from any medicine whatever; and almost approaching to certainty of effect.

“ proposed to take away three or four ounces of blood, by
“ cupping, from the chest. But although the shortness of
“ breathing was exceedingly distressing, yet he begged to
“ avoid the loss of more blood, confident that, although
“ it might afford him temporary relief, the exhaustion of
“ his strength would be irreparable. All that was pre-
“ scribed by the eminent Physician who had first seen him,
“ as well as by two others, proved ineffectual, and within
“ six weeks he sunk, *overcome by the accumulation of water*
“ *in the chest.*”

PARKINSON on Gout, p. 63.

It will not surely be objected to the DIGITALIS, that Hydrothorax is apt to return after a cure has been performed by it's use ; or that, in worn-out and entirely exhausted habits, it is incapable of prolonging life beyond a certain period. Indeed this disease unfortunately does often recur ; and if the habits that at first produced it are persisted in (which too often happens) whilst old age is advancing, this is naturally to be expected. By some of the cases, however, in the Appendix (No. 1), it will be seen, that the DIGITALIS retained, and continued to exert as long as it was resorted to, the full powers by which it's use was originally manifested ; and that until the patients were carried off by other disorders, or neglected to apply for this medicine, a few doses of it only invariably relieved their symptoms. The influence, therefore, which this plant still continues to exert upon dropsical affections of the chest in particular, after it has repeatedly been employed with success, which we rarely experience from other remedies, is an additional and very essential recommendation ; as it

always enables us to keep our patients free from the accumulation of water, whilst our endeavours are directed to restore the general strength, and to break the force of pernicious habits, or to counteract their effects.

In Consumption, DIGITALIS has been recommended by Authors upon two distinct views. Some have proposed it as a means of exciting the absorption of matter from ulcers in the lungs as rapidly as it became secreted; and thereby, of promoting the healing of these ulcers. And others have extended their views to it's power of retarding the velocity of the pulse; and consequently, of preventing the growth of new and morbid parts, and restraining the secretion of Pus by diminishing the supply of arterial blood;—at the same time that absorption was increased.

In this disease, the prognosis may with tolerable accuracy be formed from the rapidity of the circulation; there can, I presume, therefore, be little doubt that it would very fre-

quently be cured by the DIGITALIS if it possessed the power of reducing the pulse to a given standard ; and of steadily maintaining it there for almost any length of time, as some Authors have asserted, without derangement of the other functions. For no nausea or sickness being produced, sufficient sustenance would be taken, and the strength repaired, or at least kept up ; and time would thus be given to counteract unhealthy actions, and to impede the progress of disease. And it will, I am assured, be found in practice, that every case of Consumption, however advanced, is essentially benefited ; and that in affections more recent, the advances towards it's commonly fatal termination will often be suspended, and sometimes entirely stopped, by the exhibition of this remedy, *where it can thus be got to act.* But I fear we shall be greatly disappointed if we often expect this effect of DIGITALIS in Consumption. In a great majority of the patients for whom I have prescribed it in this disease, in saturated Tincture, and in the most gradually increased

closes ; I have been compelled to abandon the use of it before the circulation could be reduced; from nausea—loss of appetite—affections of the head and sight ;—or from its generally debilitating consequences*.

This difficulty of managing the DIGITALIS in such manner as generally to cause the reduction of the circulation in Consumption, depends upon circumstances connected with the nature of the complaint itself, which cannot, I fear, be controuled; and I am therefore compelled to conclude that the admirers of the plant, in attributing to it this effect, have greatly over-rated its powers. Were this observation incorrect, we should not in so many instances have to deplore the still almost uniform fate of our consumptive patients.

* Some of Dr. BEDDOES's patients could not take even a single drop of the Tincture, three times a day, without disagreeable effects. See Mrs. FINCH's case, &c.

BEDDOES on Consumption, Digitalis, and Scrofula.

Physicians of the present day seem to have abandoned, by mutual consent, the vain and profitless toil of speculative theories, by which the phenomena of health and disease might be generalized and explained; and have wisely directed their attention to a diligent enquiry into facts. In a period, therefore, distinguished by these enlightened views, to endeavour to rescue a remedy of such extensive power as that of the DIGITALIS over some of our most formidable diseases, from its present doubtful character—to collect under one distinct view, and attempt to reconcile the contrariety of opinion that at present prevails respecting the use of this medicine—to ascertain, as far as our experience will permit, the diseases in which it may really be expected to produce beneficial effects—and to give such an account of its preparation and mode of exhibition as may render it as invariably to be depended upon, as the nature of the diseases to which it is adapted, and the ever-varying state of the human body, will admit;—cannot,

I trust, prove an entirely unacceptable and unprofitable labour ; especially as Dr. FERRIAR's pamphlet (Cadell, 1799) is the only separate work that has appeared upon this subject since the publication of Dr. WITHERING's book, now out of print. For although it must be allowed that the administration of this remedy is little suited to the practice of those who have no leisure to observe it's effects with attention ; or, who dread nothing so much as exciting an uneasy sensation in the stomachs of their patients ; yet to such as are truly interested in the welfare of those entrusted to their care, and who are anxious for the promotion of the utility of our profession, it will most amply repay the attention it demands, in common with all other powerful, and consequently useful, medical agents.

Of the importance of his subject, therefore, the Author is satisfied. But, although his experience has been considerable, and he is not conscious of having neglected any opportunity of observing the effects of DIGITALIS upon

the diseases in which he believes it useful ; he still fears there may appear sufficient cause for regret, that an account of the properties of this singular and powerful plant did not fall into more able hands.

SKETCH
OF THE
MEDICAL HISTORY
OF THE
DIGITALIS.

FROM the time of FUCHIUS, who described the DIGITALIS in 1542, till by good fortune it fell into the hands of Dr. WITHERING about the year 1775, little seems to have been certainly known of the properties and effects of this medicine; and many different and opposite qualities were by the older writers ascribed to it.

The power of curing Epilepsy of long standing, Scrofula, Ulcers and Wounds, Caries of the Bones, old Coughs when the chest was loaded with tough and viscid phlegm, and

Consumptions, &c. &c. was attributed to this plant; whilst the diuretic power, by which it is most distinguished, was entirely overlooked.

To detail an account of opinions so vague and uncertain, would be useless: I shall, therefore, commence the Medical History of *DIGITALIS* with the period when Dr. WITHERING, to whom alone we are indebted for our knowledge of the virtues of this medicine, introduced it into practice.

In the year 1775, Dr. WITHERING was asked his opinion concerning a family receipt for the cure of Dropsy, which produced the effects of violent purging and vomiting. It consisted of *DIGITALIS*, together with many other herbs, but although no diuretic effect had been observed, it was evident that its efficacy could only be derived from this plant. In consequence of this relation, the Doctor was induced to make trial of it in the cases of dropsical patients who applied to him for relief; and he soon discovered that it possessed

very extensive powers as a diuretic : opportunities also occurred to him of ascertaining that it sometimes produced the extraordinary effect of reducing the frequency of the pulse to 40 strokes in a minute. It was therefore continued in Ascites, Anasarca, Hydrops Pectoris, &c. &c. in all of which disorders great benefit was experienced from it ; and so highly did Dr. WITHERING estimate it's powers, that he says, " So far as the removal of the water " will contribute to cure the patient, so far " may be expected from this medicine *."

In 1779, Dr. STOKES communicated to the Medical Society of Edinburgh the result of the experiments that had been made at Birmingham ; and it was consequently prescribed in the Infirmary there with great advantage. This success was also reported by Dr. WITHERING to several respectable practitioners in London, &c. who availed themselves of the powers of the DIGITALIS ; and many excellent cases, in which it's use was manifested, were

* WITHERING ON FOXGLOVE, Introduction, p. 6.

thus communicated to him, and afterwards recorded in his work.

Dr. DARWIN, who had in this manner become acquainted with the DIGITALIS, published in the year 1780, in a note to Mr. CHARLES DARWIN's posthumous work*, some cases of "Anasarca of the Lungs, Hydrops Pericardii, Hydrops Thoracis, and Ascites," in which he had prescribed it with considerable advantage. This may be considered as the first modern publication upon this plant.

About the same period also it appears that Dr. WITHERING was induced to make trial of the DIGITALIS in Consumption; in consequence of having heard that in the West of England it was much used by the common people in such cases; and, from the authority of a manuscript note, written by a Mr. SAUNDERS, a practitioner in Worcestershire,

* Experiments establishing a Criterion between mucous and purulent Matter, p. 103.

and found in a copy of PARKINSON's Herbal*. The extravagant encomiums lavished upon it in this disorder also, by SALMON†, and the experience of it's efficacy in Dropsy, to which Dr. WITHERING was first led by popular report, would readily dispose him to prescribe this remedy in a disease so generally fatal. But in Consumption it was given without a view to any determinate object, and accordingly it proved inefficacious. Dr. WITHERING

* "Consumptions are cured infallibly by weak decoction of FOXGLOVE leaves in water, or wine and water, and drank for constant drink; or, take of the juice of the herb and flowers, clarify it, and make a fine syrup with honey, of which take three spoonsful thrice a day, at physical hours. The use of these two things of late has done great wonders in consumptive cases. But be cautious of it's use, for it is of a vomiting nature," &c. &c.

† "It is a specific which transcends all other vegetable medicaments for the cure of Consumptions; cleansing and healing after an admirable manner Ulcers of the Lungs."—"This medicament has restored (when the patient has not been absolutely past cure) beyond all expectation."—"I have known it do wonders, and speak here from a long experience. Persons in deep Consumptions, and given over by all Physicians, have been strangely recovered, and so perfectly restored as to grow fat again," &c. &c.

SALMON'S BOTANOLOGIA.

observes of it's administration in this disease, " If the DIGITALIS is no longer useful in consumptive cases, it must be that I know not how to manage it, or that the disease is more fatal than formerly." He, however, wished a farther trial to be instituted, " and that others would undertake the enquiry, as it would be hard to deny the testimony cited at page 9*."

In 1785, after an experience of ten years in the use of this medicine, Dr. WITHERING published his excellent account of the DIGITALIS. It is written with unaffected modesty, and great candour; and enriched with numerous cases which fell under his own observation, or were communicated to him by the respectable practitioners to whom he had made known the virtues of this remedy. And it contains such sound and accurate practical remarks and inferences, drawn from the pure sources of observation and experience, that

* WITHERING on FOXGLOVE, p. 205.

had they been attentively considered and acted upon, all doubt respecting it's efficacy would have soon subsided; and all contrariety of opinion with regard to the operation and effects of this remedy, would have been speedily reconciled.

This valuable work is now out of print; I have therefore copied from it many of the directions for the use of this plant, and such practical remarks and precautions derived from Dr. WITHERING's experience, as appear most likely to prove useful, "without the strictest attention to which," as is observed by Dr. CURRIE, "no practitioner should prescribe this singular and powerful medicine*."

About the same time also appeared Dr. DARWIN's Paper, in the Transactions of the College of Physicians, containing an account of the successful employment of DIGITALIS in some dropsical affections; and one well

* Medical Reports, vol. 2d, p. 420.

marked case of Consumption, wherein it appeared to have performed a complete cure. And this Paper is remarkable, as it affords the first instance in which the DIGITALIS was prescribed in Consumption, with a view to any distinct object. “No Ulcer,” Dr. DARWIN observes, “can heal so long as the secretion
“or deposition of fluids into it is greater than
“the re-absorption of them. For so long
“there must be an oozing, or discharge from
“it; or, in other words, it will continue to
“be an open Ulcer. Now as the decoction of FOXGLOVE seemed so powerfully to
“produce the absorption of the hydropic fluid
“from the chest; and as no remedy yet discovered can be depended upon for the purpose of healing Pulmonary Ulcers, I wished
“to give it a fair trial in this calamitous
“disease*.” With this view the DIGITALIS was given in decoction, and continued for several weeks; and the patient at length, “having persisted the whole time in the use of

* Medical Transactions, vol. 3d, p. 275.

“ the medicine, occasionally varying the dose
“ from half an ounce to an ounce twice a day,
“ was perfectly restored *.” It does not appear that any considerable reduction of the pulse was effected; although it gradually became slower as the patient advanced towards recovery.

To this Paper an Appendix is added by Sir GEORGE BAKER, containing some cases of Dropsy in which this remedy had been useful, with many judicious observations upon them.

It might have been expected that these candid publications, by Physicians of the first eminence, would have attracted great attention to a medicine able to produce such beneficial effects, in a class of disorders at all times so intractable and dangerous as Dropsies; and which, on the authority of one well authenticated instance at least, seemed even to have performed a cure of Consumption. And that

* Medical Transactions, vol. 3d, p. 275.

the cautious but effective use of this plant would have become general. But this either seems not to have taken place ; or, on account of the circumstances already mentioned (p. 7 et seq.), any trials instituted with a view to ascertain it's powers, were soon abandoned. They at least produced no public benefit, and for several years after the appearance of these works, the DIGITALIS seems to have been almost entirely neglected.

Dr. FERRIAR, of Manchester, was the first Physician who entertained distinct views of the advantages likely to be derived from DIGITALIS, by it's power of retarding the rapidity of the circulation, in diseases of increased vascular action : And to him and to Dr. DARWIN we are therefore justly indebted for all our useful knowledge of the application of the extraordinary effects of this plant to the cure of Consumption, &c. The exuberance of fancy indeed, or the love of singularity, may have suggested theories by which their Authors have endeavoured to account for the

action of this remedy, upon grounds different from those proposed by these eminent Physicians; and even independent of the effects upon which their hopes of success were founded*. But such speculations, even when they possessed the advantage of being intelligible, have been productive of little profit. Indeed, the extraordinary and apparently

* Founding, then, the *modus operandi* of DIGITALIS on it's stimulating efficiency in invigorating the arterial and muscular energy of the system;—denying that, in retarding the morbid frequency of pulse, it reduces the force of arterial action;—and refusing contractility, or an independent absorbing power to the lymphatics;—it may be presumed that an adequate explanation of it's mode of action may be afforded by considering it as a powerful narcotic stimulant, capable of impressing the stomach with additional motive energy, which, through associative influence, is propagated over the system, and more particularly exerted on the heart and arteries, by which are distributed to every part of the frame an increased quantity of oxygenous and other vital principles, which may be necessary to retrieve and establish, both locally and generally, the healthy conditions of life.

Cases and Observations on the Efficacy of DIGITALIS in Consumption, by Dr. KINGLAKE.

Appendix to BEDDOES on Consumption, DIGITALIS, &c. p. 65.

opposite qualities of this plant, places peculiar difficulties in the way of such as are fond of attempting the unavailing labour of explaining the peculiar mode of action of different remedies.

In the first volume of Dr. FERRIAR's Medical Histories and Reflections, which was published in 1792, are contained four cases of active Hæmorrhage from the Lungs, in which the DIGITALIS produced decided benefit. It was given in infusion and in gradually increased doses; and in all these cases it effected the reduction of the pulse, with which view it was prescribed. In this volume also are detailed twenty-four histories of Dropsy, in about one half of which the DIGITALIS proved efficacious; several of the others were not relieved by any medicine afterwards prescribed; and some of them laboured under organic disease. The diuretic and narcotic effects of this plant suggested its use to Dr. FERRIAR in Mania also, but "it never suspended the appearances of insanity for a

“moment,” although it was made to excite nausea.

The second volume of this useful work, which appeared in 1795, contains also several cases of dropsy: but the result of Dr. FERRIAR's experience was not very encouraging; and particularly in this volume, from whatever cause, his success was perhaps inferior to what may generally be expected from the exhibition of this remedy in dropsical cases, by so accurate an observer. The result of his practice with this medicine, taken from a review of the cases in both volumes, is thus estimated:—
“DIGITALIS has been given in twenty-nine
“cases, of which eleven were cured; seven
“died; two were relieved; and nine were not
“relieved.—While Cream of Tartar succeeded
“in thirty-three cases, out of forty-three.”
In this volume there is no account of the exhibition of the DIGITALIS in diseases of increased activity, except what is contained in a note at p. 18.—“I have repeatedly stopped
“the progress of incipient Consumptions, by

“ administering this remedy, when the patient
“ was too much weakened by preceding disease
“ to bear the usual methods of lessening the
“ impetus of the circulating system.”

In the third volume, which was published in 1798, this medicine is not mentioned.

The Memoirs of the Medical Society of London, for the year 1795, contain a Paper upon the DIGITALIS, by Dr. CURRIE, of Chester, who observes, that this plant is to be reckoned amongst the sedative poisons ; he therefore condemns it's use in hydropic affections, which generally originate from debility, and are commonly accompanied by it. The sedative and debilitating effects of this plant, however, point it out in his opinion, as an useful and powerful remedy in cases of increased tone, with great irritability of the nervous and arterial systems. He states that he has accordingly employed it with success

in several cases of Mania, and in two of Hæmorrhage*.

From this time, until the publication of Dr. BEDDOES's Contributions to Physical and Medical Knowledge, in 1799, the DIGITALIS appears again to have been overlooked. Dr. DARWIN indeed (Zoonomia, vol. 2d, p. 291), mentions it's use in Consumption, but with little commendation; and he informs us that the case related in the Medical Transactions, and supposed to have been cured by this medicine, ended fatally. He here also recommends it in dropsical affections. This celebrated Physician, however, seems not to have retained his former partiality for the remedy, from which, in effusions of water into the cavities of the chest especially, he had formerly experienced such decided benefit: for he asks, speaking of Hydrops Thoracis, "Is
" it ever cured by making the patient sick by
" tincture of DIGITALIS?" It may indeed

* Memoirs of the Medical Society of London, vol. 4, art. 2d.

even be questioned, whether Dr. DARWIN continued to prescribe this medicine in his practice ; the doses he advises (from 30 to 60 drops of the saturated tincture) being far beyond what can be endured by almost any person, altho' the most gradual introduction of this preparation into the system has been adopted.

The DIGITALIS, however, was soon fated to experience a different reception, and to enjoy, for a time at least, a degree of confidence far beyond what it had hitherto acquired. Dr. WITHERING, and the other respectable writers who, about the same time, treated of this plant, candidly related the whole of their observations upon it, and consequently recorded many instances in which it had failed ; and these, although unequal to counterbalance the good effects of this remedy in many dangerous disorders, retarded, nevertheless, it's progress to general employment ; and prevented many, who might also apprehend the deleterious effects it sometimes produces when

injudiciously administered, from any attempt to use it.

But the publication of the Western Contributions suspended all reasonable doubts of the efficacy of the DIGITALIS, and banished every degree of moderation from the hopes of many practitioners who enthusiastically espoused it. According to the sanguine expectations thus excited, Consumption, even when advanced into the last stage, was, by the agency of this remedy, to become almost entirely subjected to our controul, and was thenceforward to rank in danger, only amongst the least formidable disorders; whilst it's progress was with certainty to be impeded, and it's approaches prevented. Nor were the extraordinary and almost supernatural powers of this plant to be confined to the cure of Consumption alone; the universal influence it was supposed capable of exerting over increased vascular action, promised to render it an effectual remedy in all diseases of inflammation, or, accompanied by fever; and it was consequently to super-

sede the use of the lancet, and to prevent the future necessity of all such debilitating processes*. Unfortunately these brilliant prospects have been seldom realized.

This work appeared in 1799, and contained two 'Papers' on the cure of Pulmonary Consumption by means of DIGITALIS, written without any knowledge of the intentions of each-other, by Drs. DRAKE and FOWLER. Yet, these eminent Physicians seem to have adopted this remedy upon nearly the same grounds, suggested by the observations of DARWIN and FERRIAR.

The publication of these Papers forms a new æra in the History of the DIGITALIS; and, as

* "I am now fully persuaded, that, by a judicious management of the plant, variously combined, I can obviate pneumonic inflammation with as much certainty as I can arrest the progress of an intermittent fever by means of the bark of the Cinchona. Again, I am persuaded, that, if Pulmonary Consumption be divided into four stages, the Digitalis will very certainly cure the three first, and as certainly alleviate the distressing symptoms of the last."

Medical and Physical Journal, vol. 4, p. 309.

his views of the probable effects of this medicine upon the symptoms of Consumption are given with great clearness and precision by Dr. DRAKE, it will be equally gratifying and instructive to quote them, at some length:—

“ As every Physician is supposed maturely to
“ weigh his motives for the administration of
“ any medicine ; and to form some theory of
“ its operation at least, and probable effects,
“ it may not be unnecessary in this place
“ briefly to state my views in prescribing this
“ plant in cases so apparently desperate.”

“ It has been lately maintained by the most
“ celebrated physiologists, among whom JOHN
“ HUNTER stands foremost, that Pus is a
“ secreted fluid, the consequence of certain
“ diseased motions of the extremities of the
“ blood-vessels ; it has been likewise ascer-
“ tained, that hectic fever arises only from
“ the matter of an open ulcer ; that what is
“ termed laudable Pus, when secluded from
“ the air, is neither capable of creating fever,
“ nor, except by its gravity, can it irritate

“ the parts on which it rests. When Pus,
“ however, is exposed to atmospheric air, it
“ rapidly attracts oxygen, an acid of a pecu-
“ liar kind is generated, and hectic fever,
“ the effect of the absorption of aerated mat-
“ ter, is produced. Now as an ulcer of the
“ lungs is perpetually exposed to a stream of
“ air, and of course an ichorous poison conti-
“ nually forming by the union of oxygen with
“ secreted matter, an important curative pro-
“ cess would seem to arise from promoting
[“ absorption so rapidly from the surface of the
“ diseased parts, that the Pus shall be taken
“ up as soon as secreted, and consequently
“ it's combination with oxygen prevented.
“ If at the same time the medicine employed
“ to promote absorption should so powerfully
“ retard the motion of the heart and circula-
“ ting fluids, that the irritating and morbid
“ action of the extremities of the blood-ves-
“ sels, and therefore secretion as it's imme-
“ diate effect, should be considerably dimi-
“ nished, if not altogether suspended, another
“ most salutary purpose would be accom-

“plished. To the cautious and continued
“use of DIGITALIS, Sir, I looked for these
“consequences, though whether I should be
“able to render them sufficiently permanent
“to promote a cure, was necessarily a matter
“of doubt: It was my wish also, as I have
“mentioned above, to effect these changes
“without any previous sickness, concluding
“that should I be able *gradually* to depress
“the circulation, nausea, as a link in the
“chain of effects, might be excluded, and absorption, together with a suppression of
“morbid action and secretion, still be the
“result*.”

Whether the opinion of the origin of hectic fever, thus delivered by Dr. DRAKE, be admitted or not, this application of the powers of DIGITALIS to rid the system of the presence of purulent matter, must be considered as a peculiarly happy effort of medical reasoning, founded upon the known properties and effects

* Medical Contributions, page 481.

of this plant; and in the two subjoined cases it completely succeeded.

GEORGE MARRIS, aged 16, was affected with pain of the right side, frequent short cough, copious expectoration of dense foetid Pus, occasionally mixed with blood, pulse one hundred and twenty, great emaciation and prostration of strength, slight perspiration towards morning, skin hot and dry, and shivering fits for two or three days. On the 26th of June he took fifteen drops of tincture of DIGITALIS, after having lost a few ounces of blood, which was found to be sizy. This dose was repeated twice a day, and gradually increased to fifty drops; and, on the 17th of July, the following symptoms were observed:—Pulse forty-four, expectoration reduced to three or four spoonsful, no cough, strength daily increasing, appetite good, much intermission of the pulse, but no sickness. Aug. 15th:—His pulse has never risen above fifty for better than four weeks, although the tincture has been gradually reduced to twenty-five

drops for each dose, his strength is almost perfectly restored. Ordered to omit the DIGITALIS. August 29th :—Pulse seventy, no intermission, strength perfectly restored, flesh nearly regained, and in all respects indeed well.

GEORGE GRIMES, aged 19, was attacked by symptoms equally well marked, and in an equally advanced state ; with the last patient also, he had an hereditary claim to Consumption. On the 10th of September he commenced the use of the tincture of DIGITALIS, in doses of twenty drops twice a day, and it was gradually increased to forty-five drops for the dose. The pulse was reduced to forty, but did not intermit, although some degree of nausea was the result. On the 21st of October he was in all respects well.

The following Letter from Dr. DRAKE affords me the pleasure of stating the favourable termination of these interesting cases :—

Hadleigh, May 14, 1807.

DEAR SIR,——I with pleasure seize the opportunity of giving you all the information which I possess relative to the two cases recorded in the Medical Contributions. Of JAMES MARRIS (Case 1st), I have heard nothing for some years, and can only say, that he continued free from all return of the disease when I last enquired into his situation, at a period when three years had elapsed from the attack.

GEORGE GRIMES (Case 2d), is perfectly well, nor has he experienced any relapse.

Believe me,

Dear Sir,

Your's very truly,

Dr. HAMILTON.

N. DRAKE.

Dr. FOWLER was induced to use this medicine in Consumption from it's almost uniform effect of rendering the action of the heart and arteries more slow than natural,—at the same time that it appeared to excite the action of

the absorbents ; but his expectations of success, he observes, were better founded than upon reasoning a priori ; the experience of Drs. DARWIN and FERRIAR having proved, that several cases of incipient Consumption and of Hemoptoe were cured by this remedy. It was therefore given to nine out-patients of the Stafford Infirmary, labouring under pulmonary complaints, all of whom recovered ; apparently, by means of this medicine : some cases of in-patients are also recorded, in which it produced equally beneficial effects. It is to be regretted that in these cases no register of the pulse was kept, nor, indeed, from the circumstances under which most of the patients were placed, could they be so attentively watched, as is always necessary when this medicine is prescribed in effective doses. Still, they are of great value, and, together with the accurate histories of Dr. DRAKE, they form a body of evidence sufficient to prove the power of the remedy, in some instances at least, over the most formidable symptoms of this commonly fatal disorder.

Before Dr. BEDDOES published this work, he had, from previous communication with these eminent Physicians, been induced to give the DIGITALIS in Consumption, in several examples ; but his success was far from equal to that of his correspondents :—" He
" prescribed it in a good many cases in which
" the patients were in the latter part of the
" last stage of Consumption, without being
" able to rescue any of them from that situa-
" tion, although there was a great alleviation
" of symptoms, and in some, life was greatly
" protracted." An account of several of these patients is given, in which, it is material to state, that the pulse was not reduced in any of them below seventy ; and that the quantity of the medicine necessary to produce even this reduction, often caused great nausea, sickness, and languor. In the earlier stages of the complaint Dr. BEDDOES was more fortunate. Three instances had occurred in which the DIGITALIS proved successful, and two were in progress towards recovery. An attempt is made to account for the difference

of result between these cases and those recorded by Drs. DRAKE and FOWLER, upon the principle of the greater delicacy of habit and laxity of fibre observed in the former ; an observation, the justice of which will readily be admitted by every one conversant with this disease.

Within a very few weeks Dr. BEDDOES published his first Essay on Consumption *. This short period, however, was quite sufficient to have effected an entire change in the opinions of this distinguished Author respecting the utility of DIGITALIS in this disorder.—After animadverting with much severity upon the supineness, and inattention to the promotion of our profession in general, and of this disease in particular, of the fashionable Physicians of the day, “leaders only in vogue, and last in “merit ;” we find the discovery, as it is called, of the exhibition of DIGITALIS in Consump-

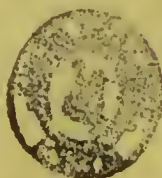
* Essay on the Causes, early Signs, and Prevention of Consumption, by T. BEDDOES, M. D.

Longman and Rees, 1799.

tion, thus announced :—" Happily the successive endeavours of English Physicians " promise a brilliant æra for humanity." " An " effectual remedy for Consumption appears " to have been nearly ascertained ;" and " I " daily see many patients in this disease advancing towards recovery with so firm a " pace, that I hope Consumption will henceforward as regularly be cured by the Foxglove, as Ague by Peruvian Bark. Could " we obtain a single auxiliary for Foxglove, " such as we have in many substances for the " Bark, I should expect that not one case in " five would terminate as 99 in 100 have " hitherto terminated." Thinking thus, it is little surprising that Dr. BEDDOES should pronounce all encomiums upon the Authors of this most useful of all discoveries inadequate, and any encomium impertinent,—that he should mention it as a cause for national rejoicing greater and more universal than had ever before occurred,—or, compare it with that of the circulation of the blood, and place his " able correspondents" on a footing with

the immortal HARVEY. It is but justice to remark, that Drs. DRAKE and FOWLER took no part of this extravagant praise to themselves. Dr. DRAKE soon after published an account of three cases of Consumption, in two of which the DIGITALIS failed; and he observes of the five cases that had now fallen under his care, three of which recovered, “I have no expectation, that upon a larger scale, the proportion of fortunate to fatal result would be what my experience has given*.” And Dr. FOWLER relates his cases with much diffidence.—We are not informed that any particular mode of administration, or of combining the DIGITALIS with other remedies, had contributed to produce the favourable results upon which Dr. BEDDOES had formed these sanguine hopes;—nor are any directions for it’s employment pointed out, except by referring to the Papers of Drs. DRAKE and FOWLER, in the Contributions.

* Medical and Physical Journal, vol. 2d, p. 268.



These publications of Dr. BEDDOES, and the remarks made upon them in the journals of the day, drew from Dr. MACLEAN, of Sudbury, who had long paid great attention to the exhibition of DIGITALIS, a very excellent Letter to the Editors of the Medical and Physical Journal, which appeared in September 1799; and, although written at a period when the attention of medical men had so lately been recalled to this remedy, it certainly contains the most just and accurate views of the powers of this plant, that have at any subsequent period been published.

Dr. MACLEAN's experience of the use of DIGITALIS in pulmonary disorders, was very considerable, and especially in Asthmatic Coughs, Dyspnœa accompanied with, or having a tendency to serous effusion, and Hydrothorax, &c.: and, even in tubercular Consumption, it was found a most valuable addition to our limited means of relief. He observes, "It will sometimes cure when the most approved remedies fail, and when of itself it is

“insufficient to subdue the disease, it will
“prove a valuable auxiliary to other means.
“Yet, it’s powers are limited even in the early
“stages ; this is all that it will be found ca-
“pable of performing, but this is doing a great
“deal ;” and he laments the probable fate
that must await his favourite remedy, from
it’s being so highly extolled ; indeed he men-
tions instances in which, even then, it had
fallen into neglect, from having been found
unequal to satisfy expectations of it’s efficacy,
that should never have been formed.

In the same Journal is contained a Paper
with several cases by Dr. MOSSMAN : the first
attempts of this Physician to effect the cure
of Consumption by DIGITALIS, however,
were like Dr. BEDDOES’s, not very satisfac-
tory ; but, like him also, he soon discovered
it to possess the most extraordinary powers
over this disorder. And Dr. BREE, who had
long directed his attention to disordered respi-
ration, tried the DIGITALIS in several in-
stances of Consumption ; and communicated

the result of his experience to the Editors of this publication. In his hands, it proved inefficacious in eight out of nine cases, but the pulse could not be reduced, in any of the former, below 96, although the medicine was made to produce other sensible effects; whilst, in the only successful instance, it was brought down to forty, and never for a month rose above fifty; at the end of this period the patient was found free of disease.—And in this volume of the Medical Journal, Dr. DRAKE, in addition to the Paper already mentioned, has given another; in which, at considerable length, he ingeniously supports his former opinions upon the mode of action of this remedy, and his account of the origin of Hectic Fever, &c. which had been objected to.

The early attention paid by Dr. FERRIAR to the DIGITALIS, and the continued use of it in his practice, for several years, particularly qualified him to treat of this plant; and the attention it very generally, at this time, excited amongst medical men, induced him to

publish an Essay on the subject. From the year 1790 he had been accustomed to prescribe it, with great benefit, in Hæmorrhage, and especially, in Menorrhagia; in many cases of which, he found it to succeed completely, in doses of half a grain every night; it was, however, sometimes necessary to repeat this dose during the day also. The cases of Consumption in which he used this medicine were of that class called scrofulous, and from the appearances observed in the dissection of such patients, his expectations of success were very moderate; but, by diminishing the velocity of the pulse, he hoped to lessen one cause of irritation to the lungs; and it appeared possible, that the abatement of the impetus of circulation might lead to a suspension of the diseased action, subsisting in them. Some advantage also was expected from the diuretic effect of DIGITALIS. Dr. FERRIAR's success in the exhibition of this remedy, however, was far from considerable; a few cases were relieved; and indeed generally, when the pulse was reduced in frequency, a considerable mi-

tigation of the symptoms followed. But few were rescued from the disease. “The result
“of my experience,” Dr. FERRIAR observes,
“may be given in a few words: it is, that
“the patient’s ultimate recovery is not to be
“confidently expected, even when the pulse
“is reduced in velocity, and the symptoms
“evidently mitigated, for a time, by the ac-
“tion of the medicine. Many disappoint-
“ments have taught me not to be elated
“by one or two instances of success; and I
“should deceive the public, if I presented to
“them only examples of fortunate practice.
“I believe that DIGITALIS, properly admi-
“nistered at the beginning of phthisical af-
“fections, may suspend the morbid action of
“the lungs, by which tubercles are formed;
“that by its continued exhibition, after
“Hæmoptysis, it may be possible to procure
“the cicatrization of the ruptured vessels,
“and thus to prevent the formation of ulcers;
“and I am even disposed to hope, that its
“power of soothing irritation may extend so
“far, as sometimes to heal ulcerations of the

“lungs, in the advanced stage of Consump-
“tion. A remedy, from which these expect-
“tations may be indulged, is of unspeakable
“value, and merits the strictest attention of
“the Physician. But, at present, I dare not
“suppose that many cases of confirmed Con-
“sumption will be cured by it ; for the exten-
“sive mass of disease, generally apparent in
“inspecting the lungs of phthisical subjects,
“and the strange formation of new morbid
“parts discoverable in it, would require for
“it's amelioration an effort of the power which
“originally created the living body.” In
Spasmodic Asthma, Dr. FERRIAR found the
combination of DIGITALIS with Opium of
great use, and by giving half a grain of each
every four or five hours, he has been able com-
pletely to suspend the symptoms of this disease.

An Appendix, with a Letter from Dr. PER-
CIVAL, is added, confirming Dr. FERRIAR'S
experience of the utility of this medicine in
dropsical, as well as in pulmonary disorders ;

but agreeing with him, that, in the latter, it had been too greatly extolled.

The opinion so decidedly expressed by Dr. FERRIAR, in this work, of the powers of DIGITALIS, in almost invariably depressing the circulation to a given standard, and of steadily maintaining it there, at the will of the Practitioner, had great weight in directing the application of this remedy, to the cure of Inflammation, and of Inflammatory Fevers*; although he does not actually recommend it

* “ If any man had expressed an opinion, a few years ago, that we should discover a medicine capable of reducing the pulse, without danger, from 120 in a minute to 75 or 80, at the will of the Practitioner, he would have been ridiculed as a visionary. Such, however, under proper management, is the power of DIGITALIS.” And again—“ It is well known to every experienced Practitioner, that bleeding with the lancet is very inadequate to the purpose of lessening the velocity of circulation, unless it be carried to a dangerous excess. The FOXGLOVE furnishes us with the means of regulating the pulse to our wish, and of supporting a given state of velocity, as long as we judge it proper.”

FERRIAR on the Medical Properties of the FOXGLOVE, p. 5 and 12.

in such diseases. —It was consequently much used, as a mean of superseding the use of the lancet, and highly commended by subsequent Authors. Dr. MOSSMAN's opinion of it's efficacy in Pneumonic Inflammation is very decided, and has already been quoted at p. 38. And Dr. CURRIE, whose premature death every lover of science has deplored, placed great reliance upon this power. —“ I have,” he says, “employed the DIGITALIS to a very “considerable extent in Inflammation of the “Brain, and of the Heart, and of the Lungs ; “and have succeeded with it in situations “where I should otherwise have despaired. I “have also found it an excellent remedy in “Inflammatory Rheumatism *.” From a private communication made to Dr. CURRIE, after the publication of his book, it appears that Dr. FERRIAR had also experienced much benefit from DIGITALIS in Inflammatory Fevers †.

* Medical Reports, vol. 2d, p. 429.

† Ditto, ditto.

From these opinions, Dr. BEDDOES, Dr. KINGLAKE, and others, who considered this plant as a tonic and stimulant, entirely dissented.—Dr. BEDDOES says, “ In Pleurisy, “ if any one should be mad or wicked enough “ to forego the so certain resource of the “ lancet, in favour of the *sedative* virtue of “ the DIGITALIS alone, he would, I apprehend, increase the disorder if he confined himself to moderate doses.—It is possible “ that immense doses, by rendering the period of excitement evanescent, might produce the desired effect. On this principle, “ Opium may be sovereign in Pleurisy. But “ I know not who would feel himself justified “ in proceeding on such a principle*.”

That the DIGITALIS, which, when given in an over dose, is capable of producing *immediately*, and without the appearance of any previous *excitement*, such deleterious and even death-like symptoms of debility, is justly reck-

* Observations on the CONSUMPTIVE, DIGITALIS, &c. by Dr. BEDDOES, p. 222.

oned as a tonic and stimulant, cannot, I think, be admitted; indeed I rather incline to consider it, with Drs. FERRIAR and CURRIE, as a direct sedative, however the Bruonians may attempt to ridicule the term.—Yet experience impels me entirely to agree with Dr. BEDDOES, that DIGITALIS is never useful in Inflammation, at least until after considerable evacuation has preceded it's exhibition.

In confirmed Consumption, Dr. CURRIE laments that the hopes entertained of the DIGITALIS have not been fulfilled, though it is of essential benefit in the predisponent state, and even in the incipient stages of the disease. In families, where this fatal disorder is hereditary, the use of this remedy as a prophylactic will, he observes, save many a life that would otherwise have been cut short.

In the 3d volume of the Medical and Physical Journal, at this time deservedly very extensively circulated, many Papers upon the use of DIGITALIS in Consumption are given,

by several respectable Authors.—A minute analysis of their contents, however, would afford little advantage, and extend this Sketch beyond it's appropriate limits*. We may collect from them generally, that this remedy was much employed;—that it sometimes produced extraordinary benefit, even in the advanced stages of the disease;—and that, in a great majority of instances, notwithstanding the partial views with which it was often prescribed, it was found only able to effect some allevia-

* Dr. KINGLAKE gives it as his opinion, that the beneficial agency of DIGITALIS is greatly increased, and it's deleterious effects lessened, by small portions of either pork, mutton, or beef, not exceeding an ounce, rather under-dressed, well masticated, and repeated every two hours, until six o'clock in the evening; and, by assiduous friction, with a flesh brush, upon the region of the stomach and surrounding parts.

Dr. KINGLAKE on DIGITALIS in Consumption,
Medical and Physical Journal, page 120.

Mr. BAILLIE on ditto, ditto, p. 127.

Dr. MAGENNIS on ditto, ditto, p. 129.

Dr. MACLEAN on ditto, ditto, p. 150.

Dr. DRAKE on ditto, ditto, p. 305.

Dr. MOSSMAN on ditto, ditto, p. 311.

Mr. PENKEVILL on ditto, ditto, p. 315.

Dr. CARSON on ditto, ditto, p. 513.

tion of the symptoms. Nor, does it appear that the experience of these ingenious Authors had hitherto contributed to approximate the diversity of their opinions upon this subject.

In 1800, Dr. MOSSMAN published an Essay upon the Origin and Connection of Scrofula and Glandular Consumption, with Observations on the Medicinal Powers of the DIGITALIS.—Of this remedy he now speaks in very high terms, and even conceives that, in the primary stages of Consumption, it amounts almost to a specific ; this Author ascribes its virtues exclusively to the dominion it is capable of exerting over the heart ; and he states, what I have invariably found to be the case, that little or no advantage is, therefore, to be expected from it, when the effect of retarding the circulation cannot be produced, before the evils arising from the deleterious qualities of the plant become obvious.

In the 4th volume of the Medical Journal, published in 1800, Dr. DRAKE gives, under

one distinct view, the whole of his experience in the use of the DIGITALIS. By this statement it appears that, from the period when the cases of GRIMES and MARRIS occurred to him in 1797, he had prescribed it in 15 cases of Consumption, with the following result :

NAMES.	STAGE.	RESULT.
Marris Mr.	Purulent.	Recovered.
Grimes Mr.	Ditto.	Ditto.
Ames Mr.	Ditto.	Ditto.
Howlett Martha,	Incipient.	Ditto.
Bridgman Miss,	Ditto.	Ditto.
Hammond Sarah,	Ditto.	Ditto.
Bush Anne,	Purulent.	Ditto.
Salmon Mrs.	Incipient.	Ditto.
Hart Anne,	Purulent.	Ditto.
Hollick Mr.	Ditto.	Undetermined.
Whitmore Mr.	Ditto.	Died.
Boutell Mr.	Ditto.	Died.
Smith Mr.	Ditto.	Died.
Green Mrs.	Ditto.	Died.
Holton Mrs.	Ditto.	Died.

The general result of these cases is very flattering, and fully equal to the degree of success Dr. DRAKE had ventured to expect*.

* Medical and Physical Journal, vol. 2d, p. 268.

And they are also highly valuable, as proceeding from the pen of a Physician of eminence and candour, who had for some years paid unremitting attention to this remedy.

Dr. MAGENNIS, who had the superintendence of the extensive Naval Hospitals at Plymouth, was induced, by the success which followed the exhibition of DIGITALIS in a very interesting case of Consumption, already related by him (STROED's, Med. and Physical Journal, vol. 3d, page 128), to make ample trial of this remedy, in the instances of this disorder which occurred among the Seamen and Marines under his care.

Such patients were, indeed, particularly calculated to ensure a more than commonly favourable result : the activity of their former habits, and their food and cloathing, both more plentiful than in the lowest classes of society, would render them less liable to attacks of Consumption ; or if, by exposure

to particular causes*, they could not escape this disease, their recovery might still, with greater certainty, be hoped for.—The confinement of these patients to an Hospital also, the regularity of their attendants, and the accurate exhibition of their medicines, would produce favourable effects, not to be expected in private practice; unless indeed in the higher ranks of patients, where attention can be depended upon: and in such examples extraordinary delicacy of frame, for the most part, counteracts every other advantage.

With every allowance, however, for the favourable circumstances under which these patients were placed, Dr. MAGENNIS's success, in their treatment, was altogether extraordinary and unprecedented; and such as,

* Dr. MAGENNIS is of opinion, that the continual and severe duty performed at this period by the Channel Fleet, which was seldom more than a few days in port at a time, contributed to produce the alarming number of Consumptions which afflicted the Seamen and Marines sent to this Hospital.

in the present state of our knowledge, I fear we shall in vain expect to find equalled.

Five of these cases are recorded at length* : they were all advanced into the purulent stage, and all appeared almost hopeless ; yet, they all recovered. The pulse in every case was reduced, by the medicine, considerably below the natural standard, and the amendment seemed commensurate. Indeed, observation confirmed Dr. MAGENNIS in the truth of this opinion. “ I have met,” he observes, “ with several instances, in which the DIGITALIS, given freely and largely, effected not “ the smallest reduction of the pulse ; and in “ these, the patients uniformly derived no advantage whatever from it’s use ;” and in proof of this fact, two interesting examples of Consumption, in which the pulse could not be reduced, and death followed, are given at length.

* Medical and Physical Journal, vol. 5, p. 204.

The tincture of DIGITALIS, employed in these cases, could not have been saturated, as 300 drops were sometimes taken daily, before the due reduction of the circulation could be effected. The whole number of patients treated by Dr. MAGENNIS amounted to 77; of these 53 were advanced into the purulent, and 24 were in the incipient stage.—45 recovered; 22 were discharged much relieved; and 10 only died!!!

In 1801, Dr. BEDDOES published his Observations on the Medical and Domestic Management of the Consumptive, and on the Powers of DIGITALIS purpurea. But the picture he now gives of his experience in the use of this remedy (since his first Essay upon the subject appeared in 1799), exhibits a melancholy reverse of the brilliant colouring, so conspicuously displayed in that work. With all the facilities of access to patients labouring under Consumption, afforded by a residence at Clifton, to a Physician who was known to have paid so much attention to this

disease ; “ and with the advantages of having
“ seen, during a period of three years, many
“ scores of phthisical invalids among the
“ poorer classes, and of having always close
“ at hand a number of opulent patients of the
“ same description ;” Dr. BEDDOES does not
seem to have met with above five or six in-
stances of confirmed Consumption, in which
this remedy was so decidedly useful, as to
merit narration. One of these cases, Dr.
BRIGGS’s, is very interesting ; the relation is
made by himself, and the state of the pulse is
accurately attended to :—the symptoms were
such as portended a fatal and speedy issue ;
and the patient was restored to perfect health
by the use of the DIGITALIS alone.

Two other cases are mentioned by Dr.
BEDDOES, in which the FOXGLOVE having,
by itself, failed to produce any good effect, it
was given, in the first, combined with tincture
of Squill and Colombo ; and, in the second,
with Cicuta and Opium. These compounds
reduced the pulse, and restored the patients.

In the Medical Contributions, Dr. BEDDOES had mentioned a patient under the influence of DIGITALIS, whose pulse, which beat at eighty, in the erect posture, suddenly fell to sixty, in the recumbent; and again mounted to eighty when the patient returned to the erect position: and he gives in this Essay, page 168, a case afforded by my friend Dr. CRAWFORD, of Bath, in confirmation of his remark. From this observation the practical inference is drawn, that attention should be paid to the state of the pulse, in the recumbent posture, when the DIGITALIS is prescribed in efficient doses; that it may not be carried too far, without due warning.—But, although I am very far from wishing that any precaution should be omitted, that is likely to ascertain (before unpleasant symptoms have occurred) when this remedy has been pushed to the full extent that can be borne with safety, and would therefore concur with Dr. BEDDOES, in recommending attention to this circumstance; I must, notwithstanding, be permitted to entertain some doubts of the

justice of the observation, as applicable to the action of this medicine alone.

I have paid much attention to this subject, without being able to convince myself of the fact in question; and I believe the variation in the pulse will rather be found to accompany debility in general, than to depend upon the particular influence of DIGITALIS. In Dr. CRAWFORD's case, it will not fail to be observed, that, as the patient advanced in strength, the variation of the pulse became less, and at length, though the medicine was still taken, it was not noticed.—Nor have I found in cases of Hydrothorax, when the difficulty of remaining reclined was overcome, and the pulse much reduced in frequency by the FOXGLOVE; that any other difference was produced from change of posture, than what may always be expected when considerable debility is present.

There is also observed great uncertainty of the manner in which the circulation is af-

fects in different patients, by DIGITALIS.—
In STROED's case, related by Dr. MAGENNIS*,
the pulse was found, for weeks together, to be
from 20 to 40 slower in the evening than in
the morning, contrary to general observation.
And Mr. ALLEN, whose case is related by Dr.
BEDDOES, found his pulse, which, from the
influence of the FOXGLOVE, was at 50 when
he continued erect, suddenly rise to 70 on
lying down upon a sofa.—This is attempted
to be accounted for, on the supposition that
some diseased part of the lungs was irritated
by pressure in the recumbent posture; but,
after remaining in bed all night, the pulse was
found as slow as when he stood up.—I have
had no opportunity of establishing the remark,
that the pulse became intermitting, as well as
slower, when a patient, under the influence
of DIGITALIS, assumed the horizontal posi-
tion; nor is this circumstance mentioned by
Dr. CRAWFORD, although the variety in his
case was very great. Still this difference of

* Medical and Physical Journal, vol. 3d, p. 128.

the pulse in different postures, demands attention, when this medicine is prescribed; and in general practice, in cases of great debility, it should never be kept out of view.

To Dr. BEDDOES'S Essay are added, in an Appendix, Cases and Observations on the Efficacy of DIGITALIS in Consumption; with Speculations on it's Modus Operandi, by Dr. KINGLAKE. Fourteen cases of Consumption, chiefly in the incipient state, are here given; in about one half of which this remedy appears to have been decidedly useful, although the pulse was not reduced in frequency in more than four of these.—In the ulcerated stage of the disease, Dr. KINGLAKE was not fortunate enough to experience any instance of recovery.

From this period, little has been written on the subject of the DIGITALIS, and the remaining part of the Medical History of this plant can record little more than the instances in which it has experienced almost total

neglect. The periodical Journals have long ceased to exhibit the high-wrought encomiums upon it, that a few years since so amply contributed to swell their pages ; and the late Authors who have written on disorders in which the beneficial agency of *DIGITALIS* was supposed most conspicuous, have not even mentioned it.

Dr. BEDDOES, in his excellent Essay on Consumption (*Hygëia*, Essay 7th), takes no notice of the *FOXGLOVE*, although the plan of his work did not preclude the commendation of other remedies in different disorders ; and the prophylactic powers of this medicine, in checking the disposition to Consumption, might well have justified a small portion of his former partiality.—Nor does Dr. BREE, who indeed had found little benefit from this remedy in Consumption, appear to have called it to his aid in any of the instances of disordered respiration, of which he has so accurately treated : yet, one of his indications in the first species of *Asthma* is, “ to remove the

“extravasated serum already present, by “absorption,” &c. The frequent occurrence of this symptom in most cases of Asthma, as the cause of irritation to the lungs, or consequence of the weakened action of the vessels of these organs; and the disposition of this disease, when long protracted, especially in advanced age, to end in Hydrothorax^{*}; must often call upon the Practitioner to endeavour to fulfil this important indication †: and, I presume, he will find no other mean of success at all to be compared with the use of Foxglove, combined with such remedies, in the intervals of the paroxysms, as are judiciously recommended by this eminent Physician ‡.

The only late Author who has paid any attention to the beneficial agency of DIGI-

^{*} See WITHERING's Account of Foxglove, sect. 10, 11, 12, 13, and 14—page 195 et seq.

[†] FERRIAR on Foxglove, page 33.

[‡] A Practical Enquiry into Disordered Respiration, by R. BREE, M.D.—Third Edition, 1803.

TALIS in Consumption, is Dr. REID*. He observes, it is only in the early stages of this disorder that we can with any confidence hope for a cure; but that, however violent the previous symptoms, if no expectoration of purulent matter have taken place, we may in general safely pronounce the disease curable: and that this remedy may, under due regulation, and with sufficient attention to other circumstances of regimen and diet, be then employed with a prospect of almost invariable success.—In Pneumonic Inflammation, Dr. REID has found the FOXGLOVE of decided use, when blood-letting had been previously employed; and in certain eruptive diseases, which are found frequently to lay the foundation of confirmed Phthisis, this medicine has effectually obviated the consumptive tendency generated by the continuance of inordinate irritation.

This respectable Author thinks that the

* A Treatise on the Origin, Progress, &c. &c. of Consumption, by JOHN REID, M. D.—London, 1806.

plant acts entirely by it's stimulant power; he observes, “ When administered in appropriate quantities, it exhausts arterial excitement with so great a rapidity, that it's stimulant power is neither perceptible nor injurious.” Although we may be compelled to dissent from an opinion that demands the admission of this effect of DIGITALIS, which is so rapidly excited and so evanescent as not to be *perceptible*; and, that this remedy has in *appearance* only, and not in reality, a sedative power, when given in considerable doses; yet, the following judicious observations, with which I shall conclude this brief account of the opinions of Authors upon the powers of this extraordinary plant, will, nevertheless, be readily admitted:—“ FOXGLOVE, however, although great, has limited powers; and both reason and experience authorize the conclusion, that, where the substance of the lungs is generally diseased and extensively ulcerated, neither DIGITALIS nor any other agent can effect more than an alleviation of the patient's sufferings.—

“ This, indeed, forms the distinctive and melancholy character of pectoral and other affections of organs, which merely, as local diseases, undermine the fabric of vitality, and divide the slender thread by which existence is supported.”

REID on Consumption, p. 249.

OF THE
CULTIVATION AND PREPARATION
OF
DIGITALIS.

THE DIGITALIS is too well known to require description. It is a biennial plant, and flowers about the middle or latter end of June. It naturally delights in dry, gravelly, or sandy soils, particularly on sloping banks; it may, however, be cultivated with great success, and with little trouble, in most situations in gardens or pleasure grounds, where a mixed artificial soil prevails.—Much difference of opinion has arisen upon the question, whether the properties of this plant are deteriorated by cultivation? I believe, however, it must be admitted, that it loses none of its

vity by removal from the situations where it spontaneously flourished.—If this conclusion be established, it will afford every Practitioner, who may be desirous of using this powerful remedy, the opportunity of cultivating it under his own eye, and of obtaining a preparation upon which he may invariably depend. For some years past I have been supplied with the leaves of DIGITALIS from my own garden, and from those of several of my friends, where it was cultivated as an ornamental plant; and, although considerable difference in the situation, soil, and exposure of the grounds, from whence my collection was made, necessarily existed, I never perceived that any parcel of the leaves thus obtained was deficient in the active qualities of the plant.—I therefore believe that the DIGITALIS may be successfully propagated in almost every garden, or amongst shrubs, where there is sufficient space to command full exposure to air; and that larger, and more vigorous leaves are thus to be obtained, than from the choaked-up plants na-

turally produced in shaded lanes and hedges.—Nor is the cultivation of this plant attended with any difficulty; the seed may readily be procured, and should be sown very thin, in the Spring, in a border of light earth. In the Autumn, the plants are to be removed to various situations, where they are intended to remain; and they will form an elegant addition to the beauty of the flower garden and ornamental plantation. No attention is required for their preservation; they will spring up in numbers from the seed of the old plants, and the only difficulty will be to thin them sufficiently.

Dr. WITHERING, who had experienced much uncertainty from the exhibition of this medicine, when possessing unequal degrees of strength, which arose from it's being collected at different seasons, directed the leaves to be gathered when the flower stems had shot up, by which this inconvenience is entirely obviated. The largest and deepest

coloured leaves* are to be selected and carefully dried, either by constant exposure to the Sun, or to a stream of air where no Sun is admitted. When completely dry, the leaf stems are to be separated by rubbing between the hands, and the leaves reduced to powder. This ought to be of a fine green colour, and of a fragrant smell, not unlike that of new-made hay, but stronger. It should be kept in coloured bottles, unexposed to the light: and although it may retain its virtues longer, as a succession can so readily be obtained, it is prudent not to depend upon it beyond one year.

The DIGITALIS is prepared for use in saturated tincture, in infusion, or in powder.—When the full diuretic powers of the plant are required, the infusion is to be preferred, as it appears to exert this influence most completely when given in that form, which also

* Our gardens afford a variety with white flowers, but as the leaves are of a paler green than the others, I have always rejected them.

allows a more gradual increase of the dose than can be effected by the powder*.—The infusion recommended by Dr. WITHERING, of one drachm of the dried leaves to eight ounces of boiling water, to which, when strained, an ounce of any aromatic spirit is to be added, is a very convenient preparation, and now generally employed. This form contains a sufficient portion of the qualities of the plant to answer every useful purpose; and it admits of easy regulation in the dose, according to the urgency of the symptoms, the strength of the patient, and the effects it produces.

In those disorders, where the chief object in view is the reduction of the velocity of the pulse, without producing any of the unfavourable effects of this medicine; and, when it is consequently important that the quan-

* In Dropsy, the other preparations merit a decided preference over the tincture, as they act more readily on the absorbent system.

tity prescribed, should be augmented in the most gradual and almost imperceptible manner, the saturated tincture is infinitely to be preferred to every other preparation.—The tincture recommended by Dr. DARWIN is made by digesting two ounces of the coarsely powdered leaves in eight ounces of proof spirit. In this composition there is probably some waste, both of the leaves and menstruum, and a small portion of the tincture only can be obtained from it, even by the strongest pressure; but, as it is of great importance to have it always uniform in strength, and fully impregnated with the virtues of the plant, I prefer this, at the expence of some loss of the materials, to that prepared with a smaller proportion of the leaves. Dr. MACLEAN has recommended a tincture with one ounce of the dried leaves, to eight ounces of proof spirit, which the Edinburgh College has adopted; and another, with four ounces of the fresh leaves to five ounces of Spirits of Wine, each to be digested seven days. I believe neither of these tinctures is fully

saturated; the latter is stronger than the former, and being made with less trouble, is to be preferred.

I have rarely used the powder of DIGITALIS, except in cases which were considered too slight to demand the attention and confinement necessary, when full doses of this remedy are prescribed. But although the infusion is greatly superior, when a powerful diuretic is indicated, still much advantage may occasionally be expected from the powder. In Chronic Coughs, Dyspnœa, &c. &c. accompanied by considerable expectoration of mucus, and a tendency to effusion into the cells of the lungs, pills formed with the powder will be taken, when the patients cannot be prevailed upon to confine themselves; and, notwithstanding that, under such circumstances, a full dose of the medicine must not be risked, it may, nevertheless, in this form, and especially in combination with other means of relief, be productive of considerable benefit.



OF THE
EXHIBITION
OF
DIGITALIS,
WITH
Practical Observations and Precautions.



EVERY medicine of extraordinary powers, and which is consequently capable of producing decidedly advantageous effects, demands great attention to the regulation of the dose, and to the collateral circumstances by which it's beneficial agency is promoted; whilst, inert and indolent drugs may be poured down the throats of the sick, or of those who fancy themselves so, with no other immediate bad consequence, than that of palling their jaded appetites, or nauseating their stomachs. The former may be aptly compared with fine-edged

tools in the hands of an expert workman ; and the latter to blunted instruments, with which even the best workman can do little or nothing. Our most excellent remedies are thus found amongst the strongest poisons, and those medicines which are recommended as being capable of doing no mischief, can rarely be expected to effect any good. Various preparations of Mercury, Lead, Copper, Antimony, Arsenic, &c. from the mineral kingdom ; and of Opium, Hyocyamus, Cieuta, Digitalis, &c. &c. from the vegetable, may be adduced as examples. Some substances also, of every class, hold an intermediate rank, and are beneficial in proportion to their degrees of power.—Amongst these classes of medicines, although the first may be found most pregnant in immediate mischief, there is none without dangerous tendency, if unskilfully applied ; and the cold bath, a dose of Jalap or of Ipecacuanha, or even an undue perseverance in the use of saline draughts, or pectoral emulsions, to the exclusion of such active curative agents as are required to check the

progress of disease,—if not so speedily productive of disastrous consequences, may become, nevertheless, equally fatal in the end, as a mistaken dose of Corrosive Sublimate, or Arsenic. The Medical Practitioner, therefore, who is not fit to be entrusted with the management of the most powerful medicine, ought not to be depended upon to administer the most trifling; as the sources of error in both are nearly equal, and differ only in the proximity of their effects: and the patient who will permit the use of no other than trifling and harmless drugs, lest danger should ensue, had better at once withdraw every degree of confidence from his medical attendant, and trust to the unaided efforts of nature alone.—Nor, indeed, can the Physician who abandons the prudent and cautious use of the more active articles of the *Materia Medica*, in compliance with the apprehensions of his patients, or from his own irresolution, hope to experience satisfaction himself, or prove beneficial to his patients, in the exercise of a pro-

fession where supineness and rashness are equally to be deprecated.

These observations, into which I have been led by the absurd objections often urged against the employment of some of our best remedies, apply with peculiar force to the plant under consideration*. The DIGITALIS is possessed of extraordinary and apparently opposite qualities. It has the power, in many instances, of reducing the action of the heart and arteries even to one-fourth of their former velocity of motion, and of restraining the pulse within these limits, even for months—a power denied to every other remedy with which we are acquainted: whilst it increases the action of the absorbents to so great a degree, that it often causes many quarts of fluid

* It was observed to me by an eminent Physician, high in the Medical Department of the Army, when I proposed the DIGITALIS in a case of Consumptive tendency, to which I thought it particularly adapted, that he had twice already been prevailed upon to prescribe *that* medicine, but that nothing should ever tempt him again to sanction it's employment.

to be taken up and evacuated daily, in both examples frequently with the immediate preservation of life*.—These opposite effects of the FOXGLOVE upon different sets of vessels, are in a great measure directed by the presence of particular symptoms, and although generally observed to happen at the same time when effusion has taken place, this is far from occurring invariably. They are also capable of being in some degree controuled by the Practitioner, according to the manner in which this plant is directed; and it therefore requires a regulation of it's management, beyond that of a medicine, merely possessing great efficacy.—But the FOXGLOVE will amply repay the extraordinary attention it demands: and, if it's powers, like those of every other medical agent, be limited; still, it will be found capable of effecting what would in vain be expected from any other remedy, and of promoting the cure, or relief, of some of the most hazardous disorders, in which, without

* The commonly observed effects of DIGITALIS are here stated; the explanation is left to others.

the aid of this medicine, the patients must be abandoned as irrecoverable.

In the exhibition of this remedy in drop-sical cases, Dr. WITHERING found much difference of effect, arising from the constitution of his patients. In persons of tense fibre, and of great natural strength, with the body in Aseites, and the limbs in Anasarea, hard and resisting, it seldom succeeded ; whilst, on the contrary, if the pulse was found feeble or intermitting, and the anasarcous limbs readily pitting on pressure, the body soft and fluctuating, the countenance pale, and the skin cold ; the diuretic qualities of the plant were found to follow it's use, in a kindly manner.— This observation induced Dr. WITHERING to attempt to bring his patients to that state, which he deemed most favourable to the employment of FOXGLOVE, by such remedies as might lower the tone of the system. For this purpose he recommends, chiefly, Squills, which he thinks the best preparative for the use of DIGITALIS, and purgative doses of Chrystals

of Tartar. These remarks, so far as I have had an opportunity of judging of them, are accurate, if applied to Anasarca and Ascites. In Hydrothorax, however, they have not been confirmed. Of my patients, several were men of very rigid fibre and great natural bodily strength; yet, the FOXGLOVE produced effects upon these, equal to what could be expected from it in more enervated habits.

The efficacy of this remedy in these cases may, perhaps, be promoted by the difficult transmission of blood through the lungs, in which it cannot, consequently, be fully exposed to the influence of the air; and the partial deprivation of the advantages derived from this essential necessary of life, is probably fully sufficient to occasion the relaxation (manifested by the clammy perspirations for the most part present in this disorder) that is found favourable to the diuretic operation of DIGITALIS.

Whether this attempt to explain the superior power of FOXGLOVE over the symptoms of Hydrothorax be satisfactory or not, I cannot hesitate to assert, that it is more successful in this species of Dropsy than in any other. And I believe in general affections we may, by attention to Dr. WITHERING's observation, with tolerable accuracy, predict what prospect of relief is likely to follow the exhibition of this remedy.

In the administration of FOXGLOVE, it is particularly necessary that the portions prescribed should not be directed to succeed each other too rapidly, as it often occurs that the first doses produce no effect, till, by frequent repetition, a considerable quantity of the medicine is thrown in; and that then violent symptoms take place, before any signals of forbearance have been observed. It is fully sufficient to exhibit the preparations of this plant once in eight, or at most in six hours, by which this inconvenience will be avoided, and the full effects of the medicine

produced. To an adult, from three to six or eight drachms of the infusion may be given every eighth hour; and half a grain of the powder, if there is reason to prefer this form, is at first a sufficient dose. Either preparation may be gradually augmented until the urine flows, or some deleterious symptom takes place, which would render it imprudent to push the dose farther. When the flow of urine occurs, in any considerable degree, it will generally continue till the effused fluid is absorbed.—The medicine had, therefore, better be omitted till circumstances demand that it should again be resorted to; and the interval may be filled up by attention to supporting the strength with nutritious food, and invigorating medicines.

It does not appear that any of the disagreeable symptoms produced by an over dose of the FOXGLOVE, are at all necessary to it's diuretic effects, which, although sometimes accompanied by nausea and sickness, &c. often take place without either. Purging,

when caused by this medicine, is observed to lessen the disposition to urinary secretion. It is therefore adviseable, in every instance, to avoid these consequences of DIGITALIS, if possible.

The most common effects observed to follow the exhibition of FOXGLOVE, when prescribed too largely, or exhibited too rapidly, are, Vertigo ; pain and throbbing of the head and temples, or in the bottom of the orbits ; indistinct vision ; inability to bear the light ; nausea of the most distressing kind, and long continued vomiting ; the pulse becomes irregular and slow, but is quickened in it's action by the slightest bodily exertion* ; great languor, debility, and tendency to Syncope, are often observed ; and the patients almost invariably complain, as Dr. MACLEAN has remarked, of a faintness and sinking at the stomach †, accompanied with loss of appetite.

* Is not this fact sufficient to explain Dr. CRAWFORD's observation ?— See page 68.

† Medical and Physical Journal, vol. 2d, p. 121.

This is indeed the first symptom usually perceived, when this remedy has been pushed beyond it's proper limits*.

When any of these appearances take place, the use of the medicine must be instantly abandoned, and recourse immediately had to the means best calculated to relieve the distressing symptoms already produced. Opium, Aromatics, Spirits, and especially the Vegetable Acids, are found most effectually to obviate the injurious effects of this plant; and, until they have subsided, it is absolutely necessary that the patient should be enjoined to refrain as much as possible from any exertion. By these means a truce from these formidable symptoms may soon be obtained; and, after an interval of a few days, the FOXGLOVE, if it appear adviseable, may again be more cautiously proceeded with.

* This enumeration of the deleterious symptoms produced by the DIGITALIS, when imprudently exhibited, will afford an excellent argument to those who judge of the use of this medicine from it's abuse.

“ These sufferings are rewarded by a return
“ of appetite, much greater than what existed
“ before the taking of the medicine.

“ But these sufferings are not at all neces-
“ sary ; they are the effects of our inexpe-
“ rience, and would, in similar circumstances,
“ more or less attend the exhibition of almost
“ every active and powerful medicine we
“ use*.” So accurate is this observation of
Dr. WITHERING, that although I have had
frequent occasion to give up the employment
of FOXGLOVE, without being able to effect
the purpose I intended by it's use, yet I never
saw an instance in which even temporary
injury was produced by it, except in Mr.
HAYLE's case (Appendix, No. 1).—The fol-
lowing inferences are copied from the same
excellent Author :

“ I. That the DIGITALIS will not act uni-
versally as a diuretic.

* WITHERING on FOXGLOVE, p. 187 et seq.

“ II. That it does so more generally than
“ any other medicine.

“ III. That it will often produce this effect
“ after every other probable method has been
“ fruitlessly tried.

“ IV. That if this fails, there is but little
“ chance of any other medicine succeeding.

“ V. That in proper doses, and under the
“ management pointed out, it is mild in its
“ operation, and gives less disturbance to the
“ system, than Squill, or almost any other
“ active medicine.

“ VI. That the *DIGITALIS* may be used
“ with advantage in every species of Dropsy,
“ except the encysted.

“ VII. In cases of Ascites and Anasarca,
“ when the patients are weak, and the evacua-
“ tion of water rapid, the use of proper ban-
“ dages are indispensably necessary.”

Upon the first and third of these inferences it may be remarked, that they will be found applicable, in some degree, to every remedy that acts by increasing the urinary secretion. No class of medicines is so uncertain in effect as this, and it will often occur that a diuretic of very inferior expectation will succeed, after the failure of those which rank highest in power. Dr. FERRIAR, in many instances, found Crystals of Tartar efficacious, when all other means had been tried without benefit; and although he states, in confirmation of Dr. WITHERING's opinion, "that sometimes "DIGITALIS will be successful when other "remedies have failed," he adds, "but this "happens with many other diuretics*."

It may therefore be concluded, that a long perseverance in the employment of any diuretic is improper; and that these remedies

* Medical Histories and Reflections, vol. 2d, p. 162.

should be varied, till that which produces the most decisive effects is discovered *.

When the FOXGLOVE alone is found unequal to remove the dropsical symptoms, it may be joined to other diuretics, with a prospect of advantage from their combined action, beyond what can often be effected by any single remedy: thus Squills, Crystals of Tartar, &c. and especially Mercury, which, by powerfully exciting the absorbents, quickens the action of every medicine of this class, and often proves the best diuretic that can be found,—may be made subservient to the action of DIGITALIS. Indeed, when time has been allowed, I have very commonly exhibited Calomel, or, if the bowels were irritable, mercurial friction, for a few days previous to the use of this remedy; and I have found this plan of proceeding decidedly superior to every

* “When diuretics act successfully, they in most cases operate early. Hence the advantage of changing diuretics in the beginning of the disease.”

Medical Histories and Reflections, vol. 2d, p. 166.

other. In Hydrothorax, this is the only combination I have had occasion to adopt, but the urgency of the symptoms in this disorder seldom affords time for the previous employment of Calomel. In other dropsical affections, the FOXGLOVE will more frequently fail, and the combination of other diuretics will often be required.

I apprehend that the observation of Dr. WITHERING respecting the difficulty of *mildly* affecting dropsical patients of considerable irritability and tenseness of fibre, by the DIGITALIS, will be also found, in a great measure, to apply to the more gradual exhibition of this remedy, when it is only intended to reduce the velocity of the circulation. In a great majority of instances this effect of FOXGLOVE cannot be depended upon, and after the most cautious introduction of the Tincture, with every attention to the circumstances by which it's favourable action is promoted, the pulse cannot be diminished in frequency, before such hostile symptoms have

appeared as compel us to abandon it's use ; or, the circulation becomes slower only when these unfavourable consequences have taken place. An attentive consideration of the causes which seemed to prevent this operation of FOXGLOVE, by which I have so often been foiled, has convinced me that they are to be found in the presence of Inflammation, or of a tendency to inflammatory action, of the vascular system. In Dropsy, where this disposition is scarcely ever present, the circulation is commonly retarded by the use of DIGITALIS; and in Hæmorrhage, where this remedy produces more decided benefit, perhaps; than in any other species of disease, after the vessels have been emptied by repeated losses of blood, the depression of the pulse is almost invariable:—I presume, also, that in health no great difficulty would be found in causing this effect of FOXGLOVE. But in Pneumonic Inflammation, where the abatement of the impetus of circulation and the increased activity of the absorbents would speedily cure the disease, until considerable loss of blood

have taken place, these favourable consequences of the exhibition of this plant will be looked for in vain. I am aware that authority of no mean weight can be adduced against this decision. I have, however, been too often disappointed in my hopes of sparing the further loss of blood, in inflammatory affections, and especially in Pneumonia, by the agency of DIGITALIS, not to be satisfied, that however respectable the Authors by whom it is supported, the opinion of the powers of this remedy over Inflammation is incorrect. Towards the latter period of Pleurisy indeed, when bleeding proportioned to the severity of the attack, and the strength of the patient shall have been premised, and when Vomica, notwithstanding, seems likely to take place; or, if great secretion of mucus be present, and effusion apprehended; this remedy will then be found to deserve the full extent of Dr. CURRIE's encomium upon it, prefixed to this volume.

When it is intended to prescribe the DIGITALIS with these views, in the advanced stages of Pneumonia, the infusion, which acts more readily upon the absorbents than any other preparation of the plant, is to be preferred; nor does the rapid progress of this disease permit a more gradual introduction of the medicine, than can conveniently be effected by this form.

In Consumption, if we endeavour to restrain the impetus of the circulation by the FOXGLOVE, the same circumstances will be found to obtain in a degree proportioned to the inflammatory disposition of the vessels. When the pulse is hard and bounding, the countenance flushed, the heat and thirst considerable, and the difficulty of breathing—accompanied with pain of the chest—urgent; little advantage will be derived from the use of this remedy, until these symptoms shall have been removed; nor, indeed, can the pulse be readily or at all reduced in frequency when they are present, unless the DIGITALIS

be given in such ample doses as to produce unpleasant effects : And, it is observed, that when the ill consequences arising from the use of this plant have once occurred, they become afterwards much more readily excited than at first. It is, therefore, essential that we should endeavour to remove every symptom likely to obviate the beneficial agency of the medicine, if we would hope to experience full advantage from it, or even give it a fair chance of success.

When Inflammation is supposed to be present in Consumptive cases, where it is intended to make trial of the DIGITALIS, its relief is consequently to be attempted by every mean likely to succeed, that has not too great a tendency to debilitate the patient, before the tincture is prescribed. A cooling regimen must be recommended. The diet should consist of milk, vegetables, and fruits ; or, if any portion of animal food be allowed, it should be of the most digestible kind, prepared in the mildest form, and taken in very

small quantities at a time. Acidulated drinks should be prescribed, and the patient enjoined to abstain from wine, spirits in every form, malt liquor, &c. &c.; all sources of mental or bodily exertion must also scrupulously be avoided. It may happen that a degree of pain shall exist in some part of the chest, that will not yield to blisters, or to any similar application; in such instances local bleeding must be had recourse to, or a general bleeding even may be requisite; and to prevent the return of such affections, or counteract their effects, it may be necessary to establish a permanent drain near the part.

If there be any Practitioner disposed to feel apprehensive of the debilitating consequences of the plan here recommended, let him recollect the extensive and irremediable injury produced by the suppuration of a portion of the lungs, or of tubercles formed in their substance—effects of Inflammation, the progress of which this plan is calculated to prevent; and, that when matter is once formed, we can

indulge little farther hope from any mode of treatment whatever. Let him also call to mind, that, if an opposite conduct—the exhibition of Steel, Bitters, and a more generous manner of living—appear sometimes to prove useful in Consumption, it is only in the advanced stages of the disorder, when the strength has been exhausted by the formation and absorption, &c. of purulent matter, the produce of Inflammation ;—and that, notwithstanding some appearance of benefit derived from this treatment, the fatal event is equally certain, and perhaps equally near.—I am very far from wishing, however, to recommend a generally-debilitating regimen in Consumption, unless it be to counteract Inflammation, which, if not speedily prevented, must prove the source of infinite mischief, and destroy our hopes of relief from the only remedy that can be at all relied upon, in this commonly destructive disorder.

When by these means the propensity to Inflammation shall have been suspended, or

considerably lessened, the use of the Fox-GLOVE may be commenced. Eight or ten drops of the saturated tincture may be given every eighth hour in a saline draught, or in a glass of lemonade, after the patient has swallowed an equal quantity of Mephitic Alkaline Water. This forms an agreeable effervescing draught, which will prevent the disposition to nausea, often caused by the first impression of a medicine upon an irritable stomach. It may also very usefully be applied to, should the more remote effects of DIGITALIS seem likely to occur. The dose may gradually be augmented by one drop added to each portion taken in the day, until the pulse is found to be reduced in frequency ; or, some of the other symptoms produced by the medicine shall have taken place. The utmost attention must in the mean time be paid to the circulation, by examining the wrist in different positions of the body, and to the other signs by which it may be discovered, when the system is likely to become affected ; that, if any of the injurious consequences of the plant should

appear, the dose may be diminished, or it's use suspended. If it be found entirely to disagree, it must be wholly abandoned. A careful examination of the patient will probably direct us to the circumstances upon which these unfavourable symptoms depend, and to the means of their removal; and the medicine, when this is effected, may again be had recourse to, with better hopes of success.

By this mode of exhibiting the tincture of DIGITALIS, the prospect of benefit is much increased, the stomach being so very gradually habituated to it's action, that the tendency to nausea, &c. is thereby greatly diminished. Fifteen or twenty drops may probably be taken for the dose, before any considerable reduction of the pulse is effected, and the quantity equal to accomplish this object must then be lessened or increased, according to the degree of retardation that is required. I apprehend it will seldom be proper to bring the circulation below 50 or 60 beats of the artery in a minute. And it is found, when once rendered

slower, by the FOXGLOVE, that a smaller quantity will keep up the effect than was required to produce it, and that a longer interval may be allowed between the doses.

Due attention to these precautions will enable us, in many cases of Consumption, to effect the wished-for regulation of the heart and arteries, without exciting any unpleasant consequence of the DIGITALIS; and to maintain the reduced action for a sufficient length of time to derive every advantage it is capable of affording. But it must be admitted that many examples also occur in which this remedy cannot thus be got to act, and where it is consequently useless. I believe this uncertainty in the beneficial agency of FOXGLOVE will generally be found to depend upon the circumstances I have endeavoured to point out.

OF THE
UTILITY OF DIGITALIS
IN
HYDROTHORAX,

AND OTHER EFFUSIONS OF WATER WITHIN
THE CAVITIES OF THE CHEST.

HYDROTHORAX was supposed by Dr. CULLEN to occur more frequently than had been imagined, and often to take place in a considerable degree, before it was discovered. I apprehend this remark will apply to the present period with still greater accuracy, than to that in which it was made. Many experienced Practitioners have informed me, that they have of late years met with a greater number of cases of effusion into the cavities of the chest than formerly, and their observation seems entitled to credit, the attention of the

Faculty not having been particularly directed by any late publications to this subject.

Gout has certainly greatly increased, at least amongst the higher ranks of society, in this country, and as Gouty subjects are often attacked by the symptoms of Hydrothorax, the latter disease will of course more frequently be observed. There are, no doubt, other causes of this fact, which it would be difficult to develop. Hydrothorax is also sometimes mistaken for other diseases, as, Organic Affections of the Heart and large vessels connected with it; Angina Pectoris; Asthma; &c. And it sometimes takes place when no suspicion of such a disorder could be entertained.—This will appear from the following case.

On the 29th of May, 1807, I was requested to visit GEORGE FENNER, the farming servant of a Gentleman residing near Bury. The account I received of his previous situation was as follows:—He had been a very

powerful man, and was in the 29th year of his age. His health had been good, except that he occasionally complained of faintness and sinking at his stomach, to which sensation, accompanied with palpitation of the heart, he was particularly subject on any sudden exertion, or on lifting great weights. He had about a year and half before this last illness experienced a disorder, accompanied with much pain of the chest and difficulty of breathing, which was relieved by blisters and bleeding; and although he recovered from that attack, his former sensations became after it more frequent and severe.—He had been ill ten days before I saw him, but the account I received of his symptoms was so indistinct, that I could form no satisfactory opinion of his situation. He was evidently dying. No pulse was felt at the wrist, and the extremities were cold. He could not remain in bed without having his head much elevated, but he had still sufficient strength to support himself on one elbow. He breathed with great difficulty, and complained of acute pain at

his heart, the motion of which was fluttering, often suspended for some seconds, and extremely laboured. In four or five hours he died, and leave was obtained to inspect the body.

This was performed by Mr. HUBBARD, an ingenious surgeon, early on the second morning after the man's death. The heart and large vessels were not found to exhibit any extraordinary appearance, except that the former was rather larger and more flaccid than common. The Pericardium contained no water. The Lungs were suffused with dark-coloured blood, and did not adhere in any part to the Pleura Costalis. But the two cavities of the Thorax contained, by computation, nearly three quarts of bloody water.

From these circumstances, a minute account of the symptoms of Hydrothorax, and a comparison between them and those of the disorders with which it may be confounded, would appear to be, in this place, proper.

Hydrothorax is thus defined by Dr. CULLEN :

“DYSPNŒA; FACIEI PALLOR; PEDUM OEDAMATA; URINA PARCA; DECUBITUS DIFFICILIS; SUBITA ET SPONTANEA EX SOMNO CUM PALPITATIONE EXCITATIO; AQUA IN PECTORE FLUCTUANS*.”

This is for the most part a disease of advanced life, and, like other dropsical affections, it often succeeds debility however induced. It chiefly attacks males who have addicted themselves to free living, especially to spirituous potation. Such as have long suffered from Gout also, are peculiarly liable to Hydrothorax. The first symptoms complained of are, a sense of anxiety and stricture across the lower part of the sternum, with some degree of difficulty of breathing upon motion, which is aggravated by attempting to ascend an acclivity. Cough, often attended with mucous expectoration, is generally also

* This definition is defective, as it does not mention the intermission and irregularity of the pulse—the most marked and common symptom of Hydrothorax.

observed at the commencement of this disorder. The urine becomes scanty and high-coloured, and the ankles anasarious; the face also occasionally swells and pits upon pressure, especially in the morning.—These signs of disease are accompanied by debility and loss of flesh.

The symptoms now described gradually increase, but their advances are slow, and a considerable time often elapses before the disorder is fully formed. The difficulty of breathing then becomes excessive. The patient can seldom continue in the recumbent posture beyond a few moments, and the head and upper part of the trunk must be supported almost erect. The sleep is often suddenly interrupted by alarming dreams; out of which the patient quickly starts up in bed, if he have attempted to take any repose, with a sense of impending suffocation. Convulsive efforts of the muscles subservient to respiration, resembling an attack of spasmodic Asthma, with violent palpitation of the heart,

generally accompany these paroxysms; which are also frequently excited by the most trifling voluntary motion, or by a fit of coughing.— When labouring under these distressing symptoms, the patient continues erect, with his mouth open, his face and extremities cold, and he betrays the utmost anxiety for fresh air; yet, it sometimes happens that an unexpected current of cold air will occasion severe returns of difficult breathing. When thus attacked, he experiences most relief if inclined forwards near an open window. The pulse with little exception is feeble, irregular, and intermits in a degree seldom experienced in other disorders: and a pain or sensation of numbness often extends itself from the heart towards the insertion of the Deltoid muscle of one or both arms. The countenance is pale, except a livid hue of the lips and cheeks remain; it betrays a peculiar anxiety and ghastliness of appearance; and, together with the upper parts of the body, is commonly covered with a profuse clammy sweat. Drowsiness, Coma, or Delirium, oc-

casioned by the difficult transmission of blood through the lungs, and want of sleep; are frequently found to attend the latter periods of Hydrothorax: and from the same cause the expectoration becomes bloody, or pure blood is coughed up. Sometimes the fluctuation of the water can distinctly be felt by the patient, or perceived by his attendants on any sudden change of posture.

It often occurs that Hydrothorax ends in general Dropsy, by which indeed it is sometimes accompanied from the beginning. But it more commonly impedes the action of the heart, or lungs, before universal Dropsy has taken place, and destroys the patient by an apparent fainting fit, or by suffocation*.

Although in every instance of Hydrothorax, an attentive observer will not fail to discover several of the symptoms above described; yet it does not appear that there is any of them,

* CULLEN'S First Lines—DARWIN'S Zoonomia—
BAILLIE'S Morbid Anatomy, &c. &c. &c.

except the sense of the fluctuation of water within the cavity of the chest, which is seldom present, that is exclusively appropriate to this disorder, or which does not sometimes occur in others.

Dr. CULLEN supposed the sudden starting from sleep to ascertain the presence of Hydrops Thoracis, and considered the disease certain when this symptom was observed.—But later Authors have found it to occur, and have therefore described it, as a part of other diseases, when no water was effused.

It may also be doubted whether there are any particular signs by which it can be distinctly ascertained within which of the cavities of the Thorax the effusion has taken place. Authors have supposed, that if one side of the cavity only was the seat of the disease, the patient inclined towards that side, in which also some swelling might be perceived; but these symptoms are rarely observed; nor is any criterion to be formed by the posture in

which the greatest share of ease can be experienced.

Greater irregularity of the pulse*, and a greater sense of weight and oppression about the heart†, have been thought to denote the Pericardium to be the part affected. But irregularity of the pulse is one of the most common symptoms of effusion into any of the cavities; and it does not invariably occur even in Hydrops Pericardii.—A few years ago I visited a child under two years old, in which the pulse in the right arm was perfectly regular, whilst in the left it was entirely suppressed. It died soon after, and five ounces of water were found in the Pericardium.

Dr. DARWIN thinks that Anasarca Pulmonum may be distinguished from the other dropsical affections of the cavity of the Thorax, by the greater facility with which

* BAILLIE'S Morbid Anatomy.

† Morgagni Epist. 16. 2d book.

the patient can, in the former, bear the supine posture; and I believe there is no doubt of the justice of this observation. It is not, however, invariably to be depended upon; for in Mr. HAYLE's case, when there was scarcely any effusion into any other part of the cellular substance, and when consequently there seemed no reason to suspect the cells of the lungs to be the seat of disease, the recumbent posture could be readily submitted to; whilst Mr. WELTON, the whole progress of whose symptoms seemed to confirm the existence of this particular affection, could not recline himself for a moment. (Appendix, No. 1). I think in this species of Dropsy, especially in the early stages of it, before it is combined with more general effusion, that I have observed the pulse to be less interrupted than in the others.

The diseases with which Hydrothorax is most likely to be confounded are, Angina Pectoris, or the Syncope Anginosa of Dr. PARRY; Asthma; and Organic Affections of

the Heart, or of the large vessels connected with it. Attention to the following symptoms, in which these disorders differ from Hydrops Pectoris, will enable us to distinguish between them with tolerable accuracy.

The Angina Pectoris affects persons of corpulent habits, and who have previously enjoyed good health. During a considerable space of time after the peculiar symptoms of this disease have taken place, they instantly cease on the patient's standing still; and long intervals are experienced, in which the enjoyment of health is perfect; nor is the pulse commonly disturbed in the paroxysms, although this sometimes happens*. There is also more acute pain and greater sense of strangulation in the attack of Angina, than in Hydrothorax; and the arms, especially the left, are more commonly and painfully affected.—There is no loss of flesh, till the disease have existed a long time; no œdema-

* HEBERDEN'S Commentaries, p. 365.

tous swelling of the ankles, nor any deficiency of urine; which on the contrary is often found to flow in large quantity*. Persons labouring under Angina can, for the most part, also bear the recumbent posture with ease; and pass the night, at least long after the accession of the disease, undisturbed.—The paroxysms, however, are observed to recur in the latter periods of this disorder, in bed, and to occasion the patient suddenly to start up†. And a full inspiration may be taken and retained a considerable time, which even appears to afford relief in Angina, but is impossible in Hydrothorax.

It is, therefore, only in the latter periods of Angina Pectoris that there can be any danger

* PARRY on Syncope Anginosa, p. 20.

† In Mr. BELLAMY's, the first case recorded by Dr. PARRY, this symptom recurred with great severity, and regularly took place between the hours of two and four in the morning. But this was evidently a mixed case, and latterly partook more of the symptoms of Hydrothorax than of Angina. On dissection, two quarts of water were found in the cavity of the Thorax.

of confounding it with Hydrops Pectoris ; and dissections have proved that these diseases are not unfrequently combined. An attentive consideration of the progress of the symptoms, however, will readily enable us to ascertain the primary affection*.

* The Angina Pectoris seems still little understood, notwithstanding Dr. PARRY's excellent Treatise upon it. This disease is commonly attributed to ossification of the Coronary Arteries, an idea which originated with Dr. JENNER. Dissections, however, prove that this cause does not always, or even frequently exist. And it is found that ossification had some time existed when no symptom of Angina Pectoris was observed. In Dr. PARRY's 2d and 3d cases, when considerable ossification was found after death both of the Coronaries and of the adjoining vessels, the patients died in a very few days from the first attack of the disorder.—If this state of the vessels also invariably occasioned Angina Pectoris, we must never expect to see it cured, or even relieved. Dr. HEBERDEN, however, mentions two cases, in one of which the patient nearly cured himself by sawing wood ; and in the other, the disease ceased of itself. Mr. L. a Clergyman of low stature, and corpulent, was attacked when about 50 years of age with the symptoms of Angina Pectoris, which continued during three or four years. The paroxysms were exquisitely marked, according to the account of an intelligent Physician who communicated this case to me, and they occurred very frequently. At the end of this period he applied to Sir WALTER FARQUHAR, and was directed

Asthma may be readily distinguished from Hydrothorax by the manner of it's attack, which is generally sudden and without previous indisposition.—During the paroxysm, the pulse is seldom or ever interrupted, although it's action is sometimes quickened. The patient, when the fit is over, enjoys perfect repose in the recumbent posture; and often experiences long intervals of ease without any return of his disorder. In Asthma also, the progress of the disease is generally so slow, that it sometimes continues during the greater part of the life of the patient; and seldom produces death, except through the medium of Hydrothorax, or some other disease of the vital organs, brought on by the long continued exertions of the respiratory muscles.

But it is for Organic Disease of the Heart or larger Arteries, that Hydrops Pectoris is

to take purging doses of neutral salts for a considerable length of time. He persisted in this plan, by which he entirely recovered his health; and for nearly five years that I have been acquainted with him, he has had no return of his disorder.

most frequently mistaken. Indeed I have rarely seen an instance of this disorder in which it had not been supposed that the symptoms were produced by deranged structure. And in such cases it is too common to abandon the patient as lost, or to attempt his relief only by the use of Anti-spasmodics and other palliative drugs.

In the early stages of Organic Disease of the Heart or large vessels, severe palpitations occur, and the patient is observed sometimes even through his cloaths to be shook by the violence of the pulsations. The heart is felt to occupy a large space. The pulse is often, but not always, irregular. But a full inspiration can be made; the patient can lie down with ease, and seldom experiences much difficulty of breathing. These symptoms come on very slowly, unless they have been occasioned by any sudden exertion, which is extremely rare.—Dr. BAILLIE and Dr. PITCAIRN are of opinion that a rheumatic affection of the heart may occasion an enlargement of this

organ.—In ossifications of the valves of the heart or large vessels, or other derangements which occasion an obstruction to the free circulation of the blood, considerable intervals of ease are often experienced; and a return of these distressing symptoms are only brought on by some mental or bodily exertion.—Thus it would appear that the circulation may be carried on sufficiently for common purposes, even if some obstruction exists; when extraordinary circumstances, however, demand an increased supply of blood, or occasion a quickened action of the heart and arteries, the difficulty of transmitting it in sufficient quantity produces the violent and irregular efforts then experienced*.

* Dr. MONSEY, the celebrated Physician to Chelsea Hospital, found as he advanced in years an irregular stop in his pulse, which occasioned him much alarm.—He applied to his friends Sir GEORGE BAKER and Doctor HEBERDEN, who concurred in opinion with him, that this interruption of the circulation depended upon ossification of some of the large vessels near the heart:—but they afterwards altered their opinion when it was discovered that this phenomenon returned only at intervals—“ob-
“serving very justly,” says the account, “that if the

A minute attention to the symptoms of the different diseases now described, and especially to their origin and progress, and a comparison of them with those which denote the attack and usual course of Hydrothorax, will for the most part enable us to decide with great certainty upon the pressure of water in the cavity of the chest. But there may be mixed cases in which the appearance of other affections are conjoined with these, it being not very uncommon for Hydrothorax to succeed to disorders of several organs contained within the Thorax. When such a combination is suspected, or when any degree of doubt is entertained of the precise nature of the complaint, the DIGITALIS may be recommended according to the plan above pointed out, not only with safety, but with almost

“ cause had been of so local a nature, the effect would
“ have been permanent and regular.” On opening his
body, however, great ossification of the large vessels, and
valves of the heart, was discovered.

Sketch of the Life and Character of the
late Dr. MONSEY.—London, 1789.

certain prospect of advantage; and although in mixed cases little hopes of final success can be entertained, great alleviation of the distressing symptoms of these diseases may nevertheless be confidently looked for, and life may no doubt be considerably prolonged. It will be observed, that in more than one of the following cases (Appendix, No. 1), very decided relief was produced by the DIGITALIS, before any increased flow of urine had taken place. This appears to have arisen from the decreased action of the heart and arteries, which in such cases may almost invariably be depended upon, from the action of this plant. Should it therefore have no diuretic effect, it may thus, nevertheless, greatly ameliorate the state of the patient. Upon this principle it acts in Aneurism; in which it has been found to afford great relief.

In pure Angina Pectoris I suppose the FOXGLOVE could have no bad effect, if it did not produce benefit. This disorder, however, is so often mixed with effusion into the cavi-

ties of the chest, that a trial of DIGITALIS would probably be proper in most instances of this singular disease. Dr. WITHERING met with two distinct cases of Hydrothorax, which had been considered as Angina Pectoris. “In the first the strength was so completely exhausted by the continuance of the disease, and the attempts to relieve it, that the patient did not survive many days. The other was a Lady, who was entirely cured by DIGITALIS in eight days, and continued in perfect health when this statement was made, six months after*.”

It may be doubted whether in Dr. PARRY's first case, related by Mr. PAYTHERUS, considerable relief might not have been experienced, and a prolongation of life effected by the use of FOXGLOVE. This patient appears to have died of Hydrothorax alone—“the paroxysms (of Angina) became less and less frequent and painful, his breathing much more dif-

* WITHERING ON FOXGLOVE, p. 201.

“ difficult, with an almost constant cough and
“ expectoration of viscid mucus. For some
“ nights he could not lie on either side, and
“ required his head to be raised with two or
“ three additional pillows.—Œdema appeared
“ in the feet and ankles. In the act of sit-
“ ting on his bed-side, he gently slipped down
“ and instantly expired*.” Although several
appearances of disease, the supposed con-
sequences of inflammation, were discovered
on inspecting the body, none of these was
sufficient to have occasioned death, the effu-
sion of water (which amounted to two quarts)
into the cavity of the chest excepted.

Dr. WITHERING has observed, ‘ that the
“ true spasmodic Asthma, a rare disease, is
“ not relieved by DIGITALIS;” but “ in
“ the greater part of what are called Asthma-
“ tical cases, the real disease is Anasarca of
“ the Lungs, and is generally to be cured by

* PARRY on Syncope Anginosa, p. 10.

“diuretics.” This is almost always combined
“with some swelling of the legs*.”

The disorder heré mentioned by Doctor WITHERING forms the Dyspnœa Aquosa of CULLEN; the Anasarca Pulmonum of DARWIN; and the Asthma Humidum, or Dyspnœa Pituitosa of the older writers. It is far from being an uncommon disease, although it is perhaps not always discovered, or even suspected to have taken place, until it terminates in Hydrothorax, or in general Dropsy. It chiefly attacks persons in advanced life, who have been long subject to troublesome coughs accompanied by considerable expectoration of mucus; and, as these coughs generally come on with the approach of winter, so Anasarca Pulmonum is most frequently found to appear during this season, or towards the spring.—The respiration is difficult at all times; but especially in the morning, after the patient has obtained some repose in bed, where, at

* WITHERING on Foxglove, p. 195.

the commencement of the disorder, he can continue to recline with little difficulty. If, however, he attempt to remain in this position, after the Dyspnœa becomes troublesome, a severe asthmatic paroxysm is often the consequence*. The pulse is little interrupted until the effusion of water is so great as considerably to obstruct the circulation through the lungs. Anasarca Pulmonum is accompanied throughout with swelling of the ankles, a deficiency of urine, and more or less of the appearance which denotes a dropsical tendency.

This disease often produces Asthma by the irritation of the effused fluid, and thus forms the Asthma Humidum of Authors; but it more

* If any part of the Lungs must be rendered useless, the inability of the extremities of them must be less inconvenient to respiration; since, if the upper parts or larger trunks of the air-vessels should be rendered useless by the compression of the accumulated lymph, the air could not gain admittance to the other parts, and the animal must immediately perish.

Zoonomia, Class I. 2, 3, 14.

commonly, if suffered to run its course, terminates in Hydrothorax, or in general Dropsy, without the intervention of any regular Asthmatic paroxysms.—In its progress, however, it is not unfrequently very slow, and many persons suffer considerably during the winter months under this complaint, and obtain a respite from their Cough and Dyspnœa in the summer, many years before the absorbents become sufficiently weakened to suffer any considerable quantity of lymph to be accumulated.

Before Anasarca Pulmonum has arrived at any great height, it is not uncommon to consider it as a cattarrhal affection merely (Cattarrhus Senilis), and to recommend for its relief different medicines, supposed to have the power of promoting expectoration; of these, as this disease chiefly affects old and debilitated persons, the warmer and more stimulating expectorants are preferred, as the Turpentine, Balsams, the Aromatic Gums, Squills, &c. &c.—That such remedies

often useful is readily admitted ; the benefit derived from them will, however, I apprehend, be found to depend, not upon their expectorant qualities (a quality not very certain in any medicine), but to be precisely equal to the diuretic effects they have produced. To affections like this the maxim of *BALGLIVI* accurately applies—"In morbis Pectoris semper ducendum esse ad vias urinæ;"—for in such cases, when the urine once begins to flow freely, the disease will speedily give way.—Here the *DIGITALIS* may be fully depended upon for relief proportioned to the promptitude of its employment, and to the steadiness with which it is persevered in. I can venture, from experience, to recommend it in such cases; and to affirm that it will very rarely disappoint the wishes of the Practitioner.

From what has been suggested under this head, it will have appeared, that, in many instances of disease affecting the cavity of the chest, when Hydrothorax is not known to be certainly present or where it is suspected to

be combined with other disorders, considerable reliance is placed upon the efficacy of the FOXGLOVE. If, indeed, organic derangement exist, no advantage, except of a temporary nature, can be derived from medicine; but I have been taught to think, that derangement of structure very often is not present when it has been believed certain; and that all the symptoms which are supposed to ascertain that the heart or large vessels are diseased, may arise from the presence of water in some of the cavities of the Thorax.— Under a suspicion of this nature, we can look only to decided relief from the use of DIGITALIS; and we are encouraged to make trial of this remedy, by reflecting, that if we should even fail of ultimate success, we are employing the only medicine that by it's singular dominion over the heart can allay inordinate action, and thus render the sufferings of the patient more tolerable.

See Appendix, No. 1.

OF THE
UTILITY OF DIGITALIS
IN
PHTHISIS PULMONALIS.

THE frequent occurrence of Consumption renders it's symptoms so familiar to every one, and therefore so unlikely to be confounded with those of other disorders, that a particular description of them is unnecessary. Dr. HEBERDEN states*, that one in four of those who grow up to manhood are carried off by this disorder in London : and although many deaths are recorded in the bills of mortality as occasioned by this disease, which probably ought strictly to be attributed to other causes ; “ yet in these bills,” Dr. BEDDOES observes,

* HEBERDEN's Commentaries, page 370.

“ a great number of deaths, not far short of a
“ thousand, under the title of Asthma,
“ Phthisic, and Cough are found, which pro-
“ bably ought to have had their place under
“ Consumption*.” Nor does this calculation
appear extravagant when applied to other
great towns. At Shrewsbury, during a pe-
riod of ten years, one death in four is appro-
priated to Consumption. In Chester, in 1774
and 1775, more deaths were attributed to this
disorder than to all the other causes of mor-
tality. And at Bristol, of 1654 persons buried
in one parish, 683 stand under the head of
Consumption or Decline.—These lists were
made out with great accuracy apparently, and
published in the Philosophical Transactions.
It is evident also that this disease has in-
creased. From Dr. WILLIAM HEBERDEN’S
examination of the bills of mortality during
a period of years taken at the beginning,
the middle, and end of the eighteenth cen-
tury, it appears that the deaths from Con-

* BEDDOES’S *Hygiæa*, Essay on Consumption, p. 5 et seq.

sumption were as five at the end, to three at the beginning*; and from other documents inserted in the Philosophical Transactions, the increased mortality from this disorder does not seem confined to the Metropolis.—Upon this melancholy picture Dr. BEDDOES, forgetting the discovery of the powers of DIGITALIS, observes, “The victims of Consumption, therefore, if the same order of things continues, will probably soon be double of what they were a century ago †.” Every attempt to lessen the sum of an evil of such magnitude, and thus increasing, will assuredly be received with indulgence, and experience a patient and candid trial.

It is during the early progress of Consumption, if at all, that we must look towards DIGI-

* Observations on the Increase and Decrease of different Diseases.—By W. HERBERT, Jun.

† “I perpetually find Consumption attacking new families. Nor does it appear to cease equally in old ones, unless by rendering them extinct.”

BEDDOES'S Hygæia, p. 21, vol. 2d.

TALIS for any lasting advantages. It will certainly often occasion the relief of several symptoms, and even protract life, in the advanced stages ; but when the disease has proceeded so far as extensively to ulcerate the lungs, this, I fear, will be found equally unavailing with every other remedy. If we wish to obtain benefit from the DIGITALIS therefore, no time is to be lost in applying to it's use ; and, to gain this object, the first approaches of the disease must be carefully watched. But it is unfortunate that the early period of Consumption is often suffered to pass without attention, or without fear ; and, that the Practitioner is seldom called upon till the disease have made considerable progress.

One of the maxims of Dr. BEDDOES, to be hung up in the heart of every Father of a Family, is, " When a son or daughter droops " between fourteen and thirty-four, suspect " that a secret enemy is sapping the Lungs." When, added to this, a slight disposition to cough, shortness of breath, and above all

quickness of the pulse, are perceived, it may fairly be concluded that the enemy has effected a lodgment, and that, if not speedily dispossessed, he will not quit his victim till death. Rapidity of the circulation I conceive to be the most unerring guide to detect the disposition to Consumption, and the most important and distinct criterion by which we can estimate the progress that it has made, and the danger present. Dr. HEBERDEN observes, “* The state of the pulse is of great importance in acquainting us with the degree of danger in a cough, which on account of it’s duration, and of the bad symptoms with which it is accompanied, begins to be of a suspicious nature. A young man of 18, together with a cough, had a spitting of blood, a shortness of breath, vomiting, pains in the side, night sweats, and was much wasted for two years; but with these

* Two instances of this kind have occurred to me, and I presume such observations must be familiar to most Practitioners.

“complaints his pulse was hardly quicker than it should be, and in three years he had perfectly recovered his health.” This accurate observer has therefore fixed the Consumptive pulse at above 90*. I have already ventured to suggest, that it is only by opposing this invariable symptom of true Consumption that the beneficial action of DIGITALIS is manifested†; and that, when an inflammatory disposition of the vascular system exists, which, I have endeavoured to prove, obstructs this effect of the remedy, it becomes unavailing. No increased action of the absorbents is produced by the FOXGLOVE, and consequently the urine is not augmented, unless effusion be present. We must therefore give up this indication of Authors, and place our sole reliance upon the reduction of the circulation, as the only mean of safety.

Our success in this undertaking will be found commensurate with the promptitude of

* HEBERDEN'S Commentaries, p. 370 et seq.

† Page 61, 65, &c.

our efforts; and the sooner we apply to the FOXGLOVE, the fewer will be our difficulties, and the greater and more decided the benefit we shall be able to afford our patients.—We shall find less inflammation during the very first approaches of the disease, and the necessity of evacuations, or of any debilitating plan, will consequently be obviated. Indeed I am of opinion that few instances of Consumption would be found to resist the powers of DIGITALIS, or advance into the second stage, were it resorted to at the very first appearance of the symptoms.

The manner of exhibiting the FOXGLOVE in Consumption, and of obviating the impediments to it's favourable operation, together with the necessary precautions to be observed during it's use, have already been described (page 102 et seq.) It has also been mentioned, that Dr. BEDDOES and some other Authors had experienced benefit from combining this remedy with Bitters, Squills, &c.

but he does not mention combinations with

ceeded in reducing the pulse, which the DIGITALIS alone had failed to effect. From such additions I have found little advantage; but Dr. MATON gives sufficient grounds, in his letter to Mr. FREAKE, to prefer the Humulus Lupulus (Hop), in cases when the addition of Bitters may be deemed proper.—“ There is
“ some nicety necessary in determining how
“ far the pulse is influenced by the use of the
“ Humulus; but, for my own part, I am led
“ to believe that it is reduced in frequency,
“ and increased in firmness by this medicine,
“ in a very direct manner. In one patient, I
“ found the number of beats lessened from
“ 96 to 60 within 24 hours, by only one drachm
“ of the Tincture and four grains of the Ex-
“ tract (given once in six hours), and a full-
“ ness of it was produced similar to that which
“ is occasioned by a large dose of Opium or
“ Hemlock. When a strongly marked in-
“ flammatory Diathesis exists, I believe the
“ Humulus to be hurtful*.”——Since Mr.

* FREAKE on the Humulus Lupulus, p. 72.

FREAKE's Treatise reached me, I have had only two opportunities of prescribing the DIGITALIS in conjunction with Tincture of Hops, and they were both too far advanced to derive any essential benefit from medicine, nor could the pulse be reduced in either. Should Dr. MATON's observation be confirmed, a very valuable addition to our means of cure in Consumption will be found in another plant of our own growth, although, when an inflammatory disposition prevails, it will require the same precautions in it's use that are demanded by the DIGITALIS.

But the most effectual mean of securing the advantages to be expected from the retarded circulation produced in Consumptive patients by DIGITALIS, or of still affording them some chance of relief when this cannot be effected; and, which indeed is absolutely essential to counteract the propensity to this disease, is found to consist in an equal and higher temperature, and in removing the Consumptive from all risque of exposure to the sudden va-

riations of our changeable climate. To patients of a certain description it has been usual to recommend a voyage to a more genial atmosphere abroad ; and when this was found impracticable, that they should pass the winter in Devonshire, or some of the warmer parts of our own kingdom ; and the air and waters of Bristol have long been supposed favourable in these cases. Such journies, however, are productive of great inconvenience and distress ; and it may reasonably be doubted whether they are of much, or even of any use. To remove a person labouring under great debility from all his connexions, can hardly fail to produce an unfavourable effect upon a mind, generally increased in sensibility, and more rarely filled with the pleasing images and hopes described as a part of this disorder than has been commonly imagined. And if the winter is to be spent exposed in the usual manner to the air of the place inhabited by these patients, it seems to matter little whether it be in Devonshire or elsewhere. In the West indeed the range of the Thermometer is

somewhat less, but the difference of temperature is still sufficient to produce every unfavourable effect of transition from heat to cold, and the changes from one extreme to the other are there equally sudden as in most other parts of the island. There is also in the West the insuperable disadvantage of greater dampness.—These objections are in full force against Bristol, and the more fashionable modern resort of the consumptive, Clifton, as a winter residence. Nor does it seem that any great advantage is to be derived from the waters of their springs. Dr. SAUNDERS* thinks that some benefit may arise from the long-continued use of a very pure water in Consumption; but if this be all, pure water can be had by distillation at home. And Dr. BEDDOES has not discovered, after a long attention to this disorder, that the Bristol water possesses any extraordinary virtue. I have therefore no hesitation in adopting the words of an anonymous writer, and to the question,

* SAUNDERS on Mineral Waters, p. 125.

supposing it to be put by a consumptive patient, '*Where shall I spend the winter?*'—"the
" general answer ought to be, '*At home;*'—
" and this both in respect to health, economy,
" and comfort."—"Those who can afford to
" spend four, five, or six months in furnished
" lodgings, may just as well put their own
" house in a condition to keep out the cold;
" and they will have a climate superior to any
" which they can easily find even beyond the
" seas in Europe, and far preferable to any in
" England*." Two adjoining rooms may readily be made so close, and so conveniently arranged with proper fire-places, that the heat in both may be maintained at from 60 to 64. These the consumptive patient should occupy, and pass alternately from one to the other, as the Thermometer indicates the increase or diminution of heat; and out of these rooms no temptation should induce him to emerge, till the full advantages of this plan shall have

* Manual of Health—London, 1806.

been experienced; or, until it appears that no plan can avail.

In the premised Sketch of the Medical History of the DIGITALIS, I ventured to doubt (page 68) whether the difference of the velocity of the pulse observed by Dr. BEDDOES and Dr. CRAWFORD, in the erect and recumbent postures, was not more an effect of general debility, than of the peculiar action of FOXGLOVE. I was led to form this opinion from having observed the influence of posture upon the pulse in many diseases accompanied by much debility, when no DIGITALIS had been taken; and, from not having found it to obtain, in some dropsical cases, when the patient was under the full influence of this remedy; still, I recommended attention to this circumstance, when the FOXGLOVE was prescribed in full doses. The following interesting observations are just published in the Edinburgh Medical Journal, July 1st, 1807. They demand attention on their own account, and throw much light on this particular sub-

ject; and they will naturally excite great observance of the pulse, when the DIGITALIS is given with a view to retard the velocity of the circulation. The relation is made by Doctor BAILDON, who was himself the subject of the case. He was cured by DIGITALIS of Consumption distinctly marked, and the whole of his narrative is highly important.

“ I suspect that the difference in the ac-
“ counts we have of it (the DIGITALIS) by
“ different Practitioners, has arisen from a
“ circumstance very clearly marked in my
“ case, and which strongly points out the
“ great care and attention necessary in exhi-
“ biting this very active drug. I observed,
“ and repeated the experiment a great many
“ times, that after the DIGITALIS had taken
“ effect, *my pulse was not lessened in frequency*
“ *when I stood erect*; it was then upwards of
“ 100. When I sat down, it fell considerably;
“ when lying on my back, it fell much more.
“ Thus, during the time it was at 40 when
“ lying, it was about 75 when sitting, and

“ above 100 when standing. This was inva-
 “ riably the case. When I turned on either
 “ side, it fell two or three, and intermitted.

“ I have found the pulse to vary in this
 “ manner, in all the patients to whom I have
 “ given the DIGITALIS to any extent. I
 “ need hardly point out the absolute necessity
 “ of carefully attending to this circumstance.”

Edinburgh Medical and Surgical
 Journal, vol. 3d, p. 271.

OF THE UTILITY OF DIGITALIS

IN

HEMORRHAGE.

THE phenomena of Hemorrhage indicate the action of DIGITALIS to be peculiarly adapted to check the symptoms of this disorder. Before the blood flows something of a hot fit is commonly experienced, and the pulse is quick, hard, and full; but after considerable loss has been sustained, these first signs of the disease are no longer perceived; the pulse becomes softer and less frequent, the skin is cool, and blood drawn from the arm is not found to exhibit a buffy coat. But although the impetus of the circulation be lessened, it still continues more rapid than in health, and the newly-formed cicatrix is unequal to resist its power, even when diminished. The vessels therefore are again ruptured, and a repetition of the

Hæmorrhage takes place: and, as it is not always safe to decrease the strength of the circulation farther by blood-letting, serious consequences are often apprehended and experienced. DIGITALIS on these occasions is our great resource; and fortunately such is its efficacy, that it seldom disappoints our wishes. There is no inflammatory disposition present, and it consequently scarcely ever fails to reduce the velocity of the pulse, which for the most part is alone sufficient to cure the disease; and this effect can be kept up without difficulty, till the wounded vessels are entirely healed, and recover their accustomed power of resistance.

The FOXGLOVE appears equally well suited to prevent the recurrence of Hæmorrhage from any part of the body; it has, however, chiefly been applied to cases of Hæmoptysis and of Menorrhagia; in these it has been used by Dr. DRAKE, Dr. FERRIAR, Drs. CURRIE, of Liverpool and Chester, &c. as already quoted, with signal advantage.

OF THE
UTILITY OF DIGITALIS
IN
SCARLATINA.

THE Scarlet Fever and Sore Throat is very commonly succeeded by anasarcous swellings of the extremities, and sometimes of the whole body ; and these, Dr. WITHERING observes*, do not always appear until some weeks after the other symptoms have ceased. For these consequences of this disease, Squills, Calomel, and tonic medicines are commonly advised ; but this affection does not seem to depend upon debility alone,—for it often occurs in a considerable degree after a very slight attack

* Account of the Scarlet Fever and Sore Throat in Birmingham, in the year 1778.—By W. WITHERING, M. D.

of Scarlatina—and even long subsequent to the symptoms of this complaint ; and it sometimes returns without any increase of debility after it had been removed by the common treatment, and when strengthening remedies had been administered. The efficacy of DIGITALIS in relieving this species of Anasarca, is confirmed by Dr. WITHERING in the following words :—“ In the year 1779, a number of dropsical cases offered themselves to my attention, the consequences of the Scarlet Fever and Sore Throat. The symptoms in all were very much alike, and they were all without an exception cured by the FOXGLOVE.”

WITHERING ON FOXGLOVE,
Introduction, p. 9.

OF THE
EFFICACY OF DIGITALIS
IN
MEASLES.

THE Hoarseness, Cough, and Dyspnœa, which generally attend the first appearance of Measles; and the inflammatory disposition of the membranes of the lungs, that often comes on when the eruption is about to subside; independent of immediate danger, not unfrequently produce so much injury of the lungs, that a lasting cough succeeds; and when the attack of this disorder has been postponed till the consumptive period of life arrive, especially if the patient be pre-disposed to Phthisis, or have tender lungs; Pulmonary Consumption is sometimes the consequence.—To avert

the danger of the primary symptoms of Measles from our patients, the adoption of a strict anti-phlogistic plan of treatment is indispensable, and bleeding, blisters, &c. may become necessary. To fulfil this indication also, the DIGITALIS has been used with success ; and my lamented friend and relation Dr. HAMILTON, late of Broad-street, London, some time since informed me, that he was accustomed to prescribe this remedy with the best effects in every period of this disease. But it is in the advanced stages of Measles, when the disposition of the membranes lining the chest to inflammation shall have ceased, or have been overcome by appropriate remedies, that it's use will be found most effectual towards checking the consumptive tendency.

To the use of the DIGITALIS, therefore, given according to the manner directed in Consumption as a prophylactic ; we may, under these symptoms, look with decided confidence for the prevention of this disease.

APPENDIX.

“ IN HOC SECUNDO OFFICIO MEDICINÆ, MULTA SUNT
“ QUÆ DESIDERANTUR; PRIMUM EST, INTER-
“ MISSIO DILIGENTIÆ ILLIUS HIPPOCRATIS,
“ UTILIS ADMODUM ET ACCURATÆ, CUI MORIS
“ ERAT, NARRATIVAM COMPOSERE CASUM CIRCA
“ EGROS SPECIALIUM; REFERENDO QUALIS
“ FUISSET MORBI NATURA, QUALIS MEDICATIO,
“ QUALIS EVENTUS.”

BACON DE AUGMENTIS SCIENTIARUM.

APPENDIX,

No. I.

CASE 1.

MR. WARNER, of Framlingham, aged near fifty, of short stature, dark complexion, and muscular, accustomed to considerable exercise in the superintendence of a large farm, and not addicted to the use of spirits or wine, was attacked in the spring of 1801 with the symptoms of Hydrothorax; and becoming gradually worse, notwithstanding a variety of medical advice, I was desired to see him on the 15th of May. I found him propped up with pillows upon a sofa, and unable to remain a moment in the recumbent posture; his countenance exhibited much of the peculiar anxiety generally found in this disorder; the pulse was rapid and intermitting, in so great a degree, that eight or ten pulsations were frequently lost; the urine was high-coloured, scanty, and

deposited a thick dark sediment ; and the ankles swelled. A purge was given, and he was directed to take six drachms of infusion of *DIGITALIS*, in an aromatic draught, every six hours, and a grain of calomel was ordered for him night and morning. No nausea or sickness followed the use of the medicine, which soon produced a very considerable flow of urine, and all his symptoms were thereby speedily relieved. In a few days he was able, with little inconvenience, to walk about his farm ; and in less than three weeks he rode to my house, a distance of 16 miles, on horseback, before breakfast. Some strengthening medicines were now given him, and Mr. HARSANT of Wickham Market, a very ingenious surgeon who attended him with me, was requested to observe him frequently, and to have recourse to the *DIGITALIS* again should any symptom of his former affection appear.

This attention was not unnecessary, for in no long time the urine again became scanty, the legs swelled, and difficulty of breathing,

increased upon exertion, again recurred. He was now relieved by the DIGITALIS as before, and he was requested to apply immediately to Mr. HARSANT for the infusion, should the symptoms at any time return. He did so two or three times before his death, which occurred February 6, 1804; but although his faith in the DIGITALIS was unbounded, he neglected to send for it. Indeed his objection to medicine was insuperable; he did not continue his tonic plan above a week, and he could not be prevailed upon even to keep his bowels in proper order, by an aperient pill. He had for some time previous to his death suffered from his former symptoms, though not so severely as before; and, to a friend who urged his application to Mr. H. he replied, that he soon would, if he did not get better. On the morning when he died he was shaving himself, and expired instantaneously.

CASE 2.

MR. WELTON, of Yoxford, of fair complexion, and very corpulent, is 68 years of age. He is a builder and auctioneer, and his situation in life and convivial disposition have equally led him into company, where he has for many years freely indulged in the use of wine and spirits. His ankles and legs have long been accustomed to swell occasionally, and sometimes the thighs, and apparently the lungs also, have partaken of the anasarca tendency; since, especially in the winter season, he has suffered from cough, difficulty of breathing, and considerable expectoration of frothy mucus. MR. WELTON has also long been liable to Gout. I visited him under these symptoms in 1800, but I have no notes of the case as it then occurred, or of the remedies employed—and the surgeon who attended him with me being dead, I can only state from recollection, that I believe he took the powder of DIGITALIS, and that his recovery was speedy.

In May 1803, I was desired to see Mr. WELTON again;—his legs were then much swelled, and the urine deficient in quantity; cough and difficulty of breathing urgent; and as he was entirely unable to bear a recumbent posture, he had only obtained short and interrupted sleep for several nights, in his chair. The countenance was livid; the pulse in this case did not intermit; it was about 100, small and hard.—The FOXGLOVE was prescribed, as in the former instance, in infusion, and gradually increased until some degree of nausea occurred; a considerable flow of urine took place, which very soon relieved these symptoms, and in a fortnight he felt no remains of his complaint. Mr. WELTON's disposition to Anasarca extending to the lungs twice returned in the two following years, and he as often experienced a complete cure from the DIGITALIS. In the winter of 1806 I visited him again, and found him labouring under a very severe attack of Erysipelas, extending from the feet to both knees; his legs were enormously distended with water, but

he had little or no cough, and he could continue in bed without any difficulty of breathing. He had taken bark largely without apparent benefit. As it appeared that the erysipelatous affection was produced by the distension of the skin, the DIGITALIS was immediately resorted to, and as usual with him considerably increased the secretion of urine. In a few days his legs were reduced to their former size, and the inflammation subsided gradually; several ulcerations, however, took place, in consequence of the blisters produced by the Erysipelas, which at length were cured by the application of slips of adhesive plaster. Mr. WELTON has since enjoyed very tolerable health, except when he has had returns of Gout, and he is now (July 1807) quite well.

CASE 3.

On October 15, 1803, I was desired to visit Mr. HAYLE, a respectable farmer of Marlesford, with Mr. HARSANT, his son-in-law. This patient was between 60 and 70, thin but mus-

cular, dark eyes and hair, and accustomed to take great exercise; he had many years freely indulged himself in spirituous potation. In the spring of 1802, he had the influenza in London, by which he was greatly debilitated, and he attributed his illness to the effects of that complaint. I found him labouring under excessive difficulty of breathing, with severe fits of coughing and expectoration of frothy mucus. His pulse was rapid and intermitting in a very great degree; there was great paleness and anxiety of the countenance; the urine was scanty, but the ankles were very little swelled; and although he could scarcely bear the slightest degree of exertion without producing excessive Orthopnœa, he was able to continue in the horizontal posture a considerable time without much inconvenience—a proof that the most characteristic symptoms of this disease are sometimes absent. An ounce of the infusion of DIGITALIS, prepared according to Dr. WITHERING's directions, was ordered to be given him every sixth hour, with a grain of calomel night and morning;

but his medicine being sent in a half-pint phial, a practice highly improper, when active medicines are employed ; as he found considerable benefit after the third dose, he determined to increase the quantity. He accordingly increased the next two doses to nearly two ounces each (allowing however, the interval of six hours to elapse between them), which produced all the deleterious effects of an over-dose of this plant. October 17th I was summoned to him in great haste, as he was supposed to be dying. I found him cold, covered with clammy sweat, and “sick to death,” as he expressed himself. He had brought off his stomach a large quantity of watery fluid, though he had drank nothing ; the pulse was reduced to 60, and was much more regular, but the difficulty of breathing, the cough, and other symptoms of Hydrothorax, were entirely gone.

The sickness was relieved by Opium, Acids, and Aromatics ; and a more guarded use of the DIGITALIS, after a proper interval, was

persisted in. His former symptoms did not return, and in a very short time he resumed his usual occupations. Within a fortnight he was able to ride over his farm, and in a month he performed a journey of nearly 40 miles in one day, on horseback. In this case, notwithstanding the relief obtained, no considerable increase of the urinary secretion took place till after the sickness had subsided. With his accustomed occupations, however, his usual habits also returned, and his propensity to indulgence was freely gratified ; his difficulty of breathing again appeared, and more than once was he obliged to apply to Mr. HARSANT for some of his medicine, which never failed to relieve him.

In April 1805, he was deprived of the use of one side and entirely confined to his bed by a paralytic attack, and I consequently soon after saw him. He had now no difficulty of breathing, no œdematous swellings of the legs, or scarcity of urine ; and his pulse, which had never become entirely free from intermission,

was much as usual. It was suspected that water might be effused upon the brain, and with this view, Mercury, DIGITALIS, and some other remedies were tried, but without the appearance of benefit; and he died suddenly, from an attack of Apoplexy, in the beginning of August following.

CASE 4.

In the winter of 1805, I was called to Mr. FAVRE of Yoxford, who was believed by his attendants to be dying. I found him under a severe paroxysm of difficult breathing, and his pulse labouring, quick, and intermitting; he had not been able to lie down for several nights, and was delirious; his legs and thighs were enormously swelled, and his urine was high-coloured and in very small quantity; the countenance was livid and ghastly. Mr. FAVRE was 73 years of age, and had been many years accustomed to the free indulgence of his taste for spirits, insomuch that he scarcely ever, for a considerable time, was known to go sober to bed. I prescribed for

him the *DIGITALIS* in the usual manner ; and his relief from it was very striking, though not quite equal to what I had before experienced. He was obliged to continue it's use for a considerable time ; and although it created a great increase in the flow of urine, and the difficulty of breathing became much less urgent, he was not entirely relieved till his mouth became affected by Mercury. He then speedily recovered from all his remaining symptoms of disease, and his strength was gradually restored. He spent the summer very comfortably, notwithstanding his great age, and cultivated his garden as usual ; but no remonstrances could prevent his indulgence in the habit of drinking. At the approach of the succeeding winter his symptoms returned, and he died of universal Dropsy, in spite of every means likely to afford him relief. As there was in this case considerable yellowness of the skin, with clay-coloured fæces, I supposed the liver to be diseased,

CASE 5.

Mr. TILNEY is a very respectable school-master at Harleston, in Norfolk; he is 69 years of age, has lived very temperately, and has used little exercise, except at times when he has greatly exerted himself to perform long journies on foot, to which mode of travelling he was particularly attached.—His complexion is dark, and he is of low stature, and muscular, without corpulency.

In the spring of 1806 Mr. TILNEY was attacked with difficulty of breathing, cough and expectoration of frothy mucus; his ankles swelled, and he was unable to use any considerable exertion. He took Squills, Mercury, DIGITALIS in small doses, &c. under the direction of a Physician, without benefit; and his symptoms having alarmingly increased, I was desired on the 15th of May, 1806, to see him. In making this visit I was accompanied by my friend Dr. FOTHERGILL, Physician to the Westminster and Western Dispensaries,

then on a visit with me; and we met Mr. STROWGER, an intelligent surgeon of the place, who carefully attended this patient through the whole of his illness. We found Mr. TILNEY propped up in bed with pillows, and labouring under the most distressing degree of difficulty of breathing. He was gasping for breath; and the violently convulsive action of the muscles of respiration, seemed frequently to threaten immediate suffocation. His countenance was pale, and covered with profuse cold perspiration. The pulse was very quick; and intermitted so much, that it could hardly be reckoned; he had obtained no sleep for many hours, and was delirious; the secretion of urine was almost suppressed, and his legs were œdematous.

In this case of Hydrothorax, the worst I had ever seen, and which indeed appeared almost decided, it required all my confidence in the salutary powers of DIGITALIS, to enable me to excite any hopes of it's probable success in the friends of my patient; or even to feel

them myself. It was however given, as the only mean that could be at all likely to procure relief. He began with half an ounce of the infusion, which was afterwards increased to six drachms. The bowels were opened with calomel, of which also he was directed to take a grain night and morning. On the 18th a considerable amendment was observed, which had gradually taken place; the infusion had produced some nausea, the urine was increased, and the breathing considerably relieved; the pulse had less intermission, and was reduced to 90; his delirium was almost gone off, and he was able to get some comfortable sleep in his chair. On the 22d, the pulse was 54, and regular; swelling of the ankles and delirium gone, secretion of urine plentiful. He continued the use of the Fox-GLOVE another week, when every symptom of his former complaint had disappeared. He now was recommended strengthening remedies, of which he stood much in need; and about three weeks afterwards when I saw him again, he assured me that he felt no remains

of indisposition, except that he found he could not walk as formerly, without fatigue. I have since several times seen Mr. TILNEY in perfect health; and a few days ago, in answer to an application to Mr. STROWGER to enquire into his situation, I received the following letter:—

“ Harleston, June 28, 1807.

“ DEAR SIR,—I am happy to inform you Mr. TILNEY is in a high state of health, and has continued so without any interruption to it by a return of his disease. It will not be necessary for me to say much more on the subject after the following:—On Monday last he walked to Norwich, a distance of 20 miles, and finding himself in no degree fatigued, he returned the following day, without any inconvenience to his muscular or respiratory powers.

“ I am, Dear Sir,

“ With much respect,

“ Your’s sincerely, &c. &c.

Dr. Hamilton.

“ S. STROWGER.”

CASE 6.

The following case was communicated to me by Mr. S. REVANS, an intelligent surgeon of Halesworth:—

“ ELIZABETH DAVY, of Rumburgh, near Halesworth, aged 65, was in April last attacked with Dyspnœa, which daily became more oppressive, notwithstanding the use of a variety of medicines. In the beginning of June I was desired to see her; her Dyspnœa was now so distressing, that she had not been able to go to bed for a fortnight, and for the last week she had scarcely slept at all, even in an erect posture. Her pulse was labouring, and intermitted on the slightest exertion; she likewise complained of a sense of suffocation, and frequent and copious sweats broke out upon her forehead and face; her legs were much swelled, and the secretion of urine was greatly diminished.

“ From a review of the symptoms of this case, I had no doubt of it's being Hydrothorax ; and being acquainted with the event of Mr. TILNEY's case, I determined to give the DIGITALIS a fair trial. I made an infusion of a drachm of the dried leaves in half a pint of water, of which I directed her to take a table-spoonful every six hours ; and which, after a few doses, was increased to a table-spoonful and half at a time. After her continuing the medicine for 48 hours, it produced considerable giddiness and nausea ; and she then voided a large quantity of urine, which she continued to do, particularly during the night, for a week, when she was completely relieved of the Dyspnœa and all her distressing symptoms ; and could walk and attend to her business with more ease than she had been able to do for the last two years.

“ About a month back, she had a slight return of the difficulty of breathing, which was removed by the infusion in two or three days,

and I have seen her within a week, entirely free of complaint."

In answer to a letter of enquiry respecting the subject of this case, written a few days ago, I have received the following communication from Mr. REVANS:

" *Halesworth, July 18th, 1807.*

" DEAR SIR,——I have frequently seen ELIZABETH DAVY since the illness of which she was cured by DIGITALIS; and although she sometimes complains of being unwell, she has had no return of the Dyspnœa or Hydropic affection. Her complaints are merely such as we hear of from the advance of age, and a gradual failure of bodily strength.

" Believe me, Dear Sir,

" Very sincerely your's,

" STEBBING REVANS, Jun.

" *Dr. Hamilton.*"



OBSERVATIONS

UPON THE FOREGOING

CASES,

AND OBJECTIONS ANSWERED.



SOME of the above Cases are perhaps not to be surpassed in the severity and apparent danger of their symptoms, and in the speedy and complete relief afforded to the patients labouring under them. They consequently excited some attention in the districts where they occurred, and many remarks and criticisms have been made upon them by different Practitioners, either directly to myself in conversation with their more ingenuous Authors; or, which have reached me by report. These remarks enable me to anticipate the objections that may arise against them, if they shall now become more generally known;

which may also, perhaps, have some weight in removing the prejudices still entertained against the use of FOXGLOVE in Hydrothorax: and in counteracting the opinion that this disease is incurable—an opinion very generally entertained, and which cannot be too often decidedly contradicted.

The following are the chief objections (independent of those advanced against the general employment of FOXGLOVE, already noticed) which have been made against those cases.

1st. That the DIGITALIS only affords temporary relief in Hydrothorax; and, that no person completely recovers from it, by this, or any other remedy.

2d. That Hydrothorax is usually combined with deranged structure of the lungs, heart, or large vessels; and that, consequently, no permanent relief can be obtained by any mode of treatment. Thus the 1st and 3d cases were

decidedly pronounced by the Medical Gentlemen who attended them, to be caused by organic disease ; and the sudden death of both these patients was afterwards adduced in support of this opinion.

3d. That the relief obtained could not fairly be attributed to the DIGITALIS alone, as Calomel in every instance was also given. And it has been urged, that the disease had been mistaken for a fit of Asthma, Angina Pectoris, &c. &c. Such observations have not arisen from those acquainted with the symptoms of these diseases, and I may therefore be excused from paying them any attention.

These objections have, in several instances, proceeded from Medical Gentlemen of candour, and of considerable professional information. Yet, they shew little acquaintance with the nature of Hydrothorax ; by which I am confirmed in the opinion, that this disorder has not been so much attended to as its importance demands.

In answer to the first, it may be sufficient to refer to the second, the fifth, and the sixth cases. Perhaps, however, it may be said that the second was not, strictly speaking, a case of Hydrothorax, but of Anasarca Pulmonum. This point I readily concede; for whether the fluid be contained in one cavity or another, seems unimportant. The relief afforded by DIGITALIS is the same in every instance, as far as experience enables us to determine; and every species of effusion is alike pregnant with danger to life. That Hydrothorax is apt to recur cannot be doubted. The causes which originally produced this affection often continue to act with full force;—it is a disease of old age, and generally of debility;—and perhaps it is impossible that any part of the body can have been the seat of such a disorder, without being thereby rendered more liable to its return. That it does return, therefore, is the inevitable consequence of bad habits, advanced age, and disease.—But, that it can completely be cured by the FOXGLOVE, is evident from the 5th and 6th

cases; and, that it may be repeatedly suspended, and finally entirely overcome, after it had several times returned, may be justly inferred from all the examples given both by Dr. MACLEAN (Appendix, No. II.), and myself. I presume, after duly considering the history of these cases, it will no longer be denied, that Hydrothorax can completely be cured by FOXGLOVE, &c.—Indeed it would seem to me equally correct to state, that Ague cannot ultimately be cured by Peruvian Bark; or, Lues by Mercury. The recurrence of the disease ought not, therefore, to impeach the utility of the mean successfully employed in it's relief; and, if it possess the power of frequently effecting this purpose, the more are we indebted to the benignant influence it is capable of exerting.

Had it accorded with the plan of this work to have entered fully into the history and causes of Hydrothorax, the connexion between this disease and deranged structure of the Thoracic Viscera, would have been

fully pointed out. Effusion into the cavity of the chest is often the effect of Inflammation, and of the adhesions and derangement of structure which sometimes follow it. When Hydrothorax is thus caused, or accompanied, it's cure becomes necessarily more difficult. Still it may be relieved, and I have endeavoured to shew that this should, in every instance, be attempted. If it be insisted upon that Mr. WARNER's sudden death was occasioned by organic disease, the perfect ease for a long time afforded by the Foxglove in his case, is the best argument I can adduce of it's powerful influence over such affections. But I do not conceive that there was deranged organization in either Mr. WARNER's or Mr. HAYLE's case; the relief in each was complete, and no symptom of disorder whatever was observed to remain, except some intermission in the pulse of Mr. HAYLE, which continued during his life, and which might be caused by adhesion of the pleuræ to each other*, or by different causes. In the 1st,

* BAILLIE's Morbid Anatomy.

death was evidently occasioned by the recurrence of Hydrothorax, which the patient had neglected to secure the means of preventing. And in the 3d, the Hydropic disposition seems to have been entirely overcome. In the early part of April this patient was attacked with Palsy, and in August following he died of Apoplexy, without the recurrence of any Hydropic symptom whatever in the intermediate time.

It must therefore either be admitted that there was in these cases no organic disorder ; or, that it was overcome by the powers of DIGITALIS. And I have never presumed to state that in advanced life this medicine could prevent the approach of *every* disease ; or, that it could act *when it was not exhibited*.

I have already observed that Calomel is supposed to increase the action of every diuretic remedy ; and, especially if there be room to suspect that Hydrothorax is combined with organic disease, the aid of this medicine be-

comes essential. I have found this combination of signal use, and although I must be of opinion that the chief and immediate relief is fairly to be attributed to the FOXGLOVE, so long as this can be produced, I shall not dispute concerning the means by which it is effected.

APPENDIX,

No. II.

LETTER,

With Observations on Digitalis,

AND CASES OF HYDROTHORAX.

BY DR. MACLEAN.

Sudbury, July 28th, 1807.

DEAR SIR,

I_N our conversation on the subject of DIGITALIS, when you did me the favour of passing a day with me lately; you expressed some surprise on my observing that I had met with certain cases of Hydrothorax, connected with peculiarity of constitution, in which this herb, when administered alone, produced no sen-

sible increase of the urinary secretion ; as you had, in this kind of Dropsy, found it invariably successful, with no other addition than Mercury ; and in the letters you have since addressed to me, you request to be furnished with a case or two in point, which you wished to publish in your work, as your object was to give a just view of the action of this powerful remedy. Regarding the subject as extremely interesting, I have great pleasure in complying with your wishes, as far as my time will permit. The cases I send you are selected from about 80 well-marked instances of Hydrothorax in my report-book, beginning with the first in which the FOXGLOVE, of my own growth, had a full and fair trial, and ending with one now under my care. You have, doubtless, noticed what Dr. WITHERING has said on this subject (p. 189) in his excellent work. These observations, as well as those generally advanced by this accurate but modest writer, are entitled to the greatest attention, and have been for the most part confirmed by my experience. If, in addition to

these, the limbs be of a dark livid hue; the patient of a full corpulent, or what is termed, a *cold phlegmatic habit*; the bowels costive, more especially if they require the aid of active purgatives; very little, if any, advantage is to be derived from the FOXGLOVE, either alone or in combination, in the fullest doses, and administered with the usual precautions: on the contrary, by the distressing sickness, and other unpleasant symptoms which it produces, it seems to retard the salutary operation of other remedies. It is proper, however, to remark, that when the disease occurs in such habits, the cure is in general tedious and difficult. Experience, therefore, has taught me not to build my hopes on the FOXGLOVE alone; and if I have had more than ordinary success in the cure of this formidable disease, it is to be attributed more to the united powers of the combinations used, than to any individual ingredient entering their composition. DIGITALIS, Squills, Calomel, Crystals of Tartar, the fixed Vegetable Alkali, and a few other diuretics, when separately administered,

will very seldom be found permanently to cure the disease; but by selecting, blending, and combining them together in certain proportions, according to the particular circumstances of every case, which in no two instances are precisely alike, each of these seems to acquire additional efficacy, and the most salutary advantages will result. And certain peculiarities of constitution will be found, in which some of these cannot be administered. Hence the necessity of the knowledge of the art of judicious selection and combination, which can only be acquired by long experience, aided by a close and patient attention to the operation of medicine, and the phenomena of the disease. I shall only observe, that by means of the combinations I have been in the habit of using, my object invariably has been to accomplish at once, or by one indication, what is generally attempted by three. Thus, while administering remedies for evacuating the water; the removal of any organic affection, or other cause, which may have occasioned its effusion, retard or prevent its ab-

sorption, as well as the restoring the lost tone and strength of the habit at large, or of any particular organ, which generally forms a prominent feature of the disease; are held in view at the same time: Hence, as these vary in degree and kind in every case, so those combinations must be varied also in the same proportion; and instead of increasing the degree of debility already existing, the strength very generally improves from the beginning.

CASE 7.

Mrs. EWER, of Belchamp St. Paul's, Essex, has several times consulted me. She is married, 40 years of age, and the mother of several children; of a constitution naturally delicate, and much weakened by frequent parturition, and by the cares and fatigue of a large family. Her complaints indicated great weakness and irritability of the heart and lungs, having been subject to hurried and difficult respiration, attended frequently with palpitation, or *fluttering* as she termed it, of the heart, increased upon bodily exertion or emotion of

mind.—From these complaints she always received benefit by the means recommended. On the 12th of March, 1796, she again consulted me, and I find in my case-book the following memorandum respecting her disorder:—"Symptoms of Hydrops Pectoris." A blister was applied to the chest, and some expectorant medicines were prescribed, by persevering in the use of which, with appropriate regimen for some time, her complaints gradually subsided, and she continued to enjoy her ordinary health till the spring of 1798, when they returned: and I find her again on my report-book June 23d, with similar complaints, for which similar remedies were prescribed. July 13th, 1798:—No relief from the last medicines. In every respect worse. Respiration very much interrupted, especially on motion, or on lying down in bed. Pulse quick, feeble, and extremely irregular; urine very small in quantity, and high-coloured, with sediment; ankles and legs œdematous. Supposes herself in the fifth month of pregnancy; and there is every reason to suspect the fœtus

has been dead for a fortnight, in which period her complaints have made very rapid progress. Has for some months suffered great mental anxiety and uneasiness, from causes unnecessary to state here ; to which her present illness is to be attributed.

R. DIGITALIS PURPUR. fol. pulv. gr. j.

Confect. aromat. q. s. ft. pilul.

nocte maneque cum cochlear. ij. mistur.
infra præscript. Sumend.

R. Fol. DIGITALIS PURPUR. siccata. 3j.

Infunde in Aq. Puræ bulientis ℥viij. et
cola. dein.

R. Infus. Colat. ℥v.

Spt. Juniper C. ℥ss.

Spt. Ætheris Nitrosi.

Spt. Ætheris Vitriolic C. sing. 5ij. M.

Particular injunctions were given to discontinue the FOXGLOVE as soon as it produced any of its unpleasant effects.

I heard no more of her till the evening of July 17th, when my immediate attendance

was desired. I found her retching, and bringing up at times a dark coloured matter, like coffee grounds; the extremities were cold; the pulse extremely small, fluttering, and irregular; she had frequent faintings; or to use the language of those about her, “they could not keep life in her;” the body was covered with cold sweats; she had been in this state for several hours: the cause of these alarming symptoms was sufficiently obvious. On enquiry, I found she had experienced immediate relief from the medicines; that the quantity of urine was very much increased; the swellings nearly gone, and that she was considered as mending very rapidly till this morning, when the stomach began to be disordered. I found also that she had been under the influence of the Foxglove nearly two days; yet, in direct contradiction to the directions rigidly enjoined, she was desired to continue it this morning. It was in vain that relief was attempted through the medium of the stomach; for every thing liquid, even in the smallest quantity, was immediately rejected. By an

Anodyne Glyster, warm Anodyne Embrocations rubbed into the Epigastrium and Abdomen, and Feet, small pills of solid Opium with Confect. Aromatica; all the urgent symptoms subsided in a few hours, and I had the pleasure of leaving my patient in the morning quiet and composed.

She continued gradually to mend from this time till, about a fortnight after, she miscarried of a foetus which bore evident marks of having been dead at the time she apprehended. The water now began to accumulate in the chest and legs with unusual rapidity, and with it all her former distressing symptoms returned.— But although her strength was nearly exhausted, the water was speedily evacuated by the same means; and by a combination of tonics with diuretics, she was restored to health in a few weeks.—She has had no return of the dropsical symptoms, but has had two or three attacks of her former complaints, and always received advantage from medicine.

On the whole, her health has been of late years improved.

In every point of view this case will appear interesting : An amiable woman has been rescued from the most alarming state by a remedy which, by the most flagrant inattention, had nearly proved her destruction.

The result of this case impressed on my mind so favourable an opinion of the Fox-GLOVE, that I determined to direct my attention more than ever to it; and from this period it has always formed a part of my remedy in Dropsy ; and my failures hitherto having been as much owing to the quality of the herb used, as to my ignorance of the proper dose and mode of exhibition, I furnished the Practitioner with whom it was prescribed with a portion of the leaves out of my own garden. Having been absent from Britain when WITHERING's excellent work was published, and for some years afterwards, I had

not the good fortune of seeing it at this time, and of borrowing light from so safe a guide.

CASE 3.

June 5th, 1797, Mr. CARR, of Boxford, aged 66, called for my advice.—He was of the middle stature, neither robust nor muscular; not addicted to any excess in drinking; within a few years he had retired from an active business, and lived a sedentary, studious life; but he enjoyed good health before the illness to which he dates his present complaints,

Breathing, quick hurried and anxious, especially on any sudden bodily exertion, or emotion of mind, attended frequently with palpitation, and what he called a “fluttering” about the heart; pulse, feeble irregular and intermitting; feet and ankles œdematous towards evening, and readily pitting on pressure; urine natural in every respect; can lie down in bed on either side without any inconvenience; has never been roused from sleep by

a sense of suffocation ; appetite good ; bowels regular ; bodily strength much impaired.

About three years since had an attack of Hemiplegia, in which I attended him, and from which he soon recovered ; a slight degree of weakness of one side, and distortion of the mouth, only remaining.—In this attack the pulse intermitted, since which it never recovered its regularity ; and he remarked that his breathing had not been so free as before.

Being about to remove to Colchester, his native place, I was glad of the opportunity of committing my sentiments of his case to paper, to his nephew Mr. NEWELL, a Practitioner of experience and acknowledged reputation, who resided there ; as well as of the plan I thought best suited to obviate present and remote evil.

Having been fortunate in meeting with five well-marked cases of watery effusions into

the cavities of the chest, some of which I was now attending, and which were doing well; since the subject of the former case fell under my care; I had no hesitation in predicting the approaches of a serious and formidable disease, namely, serous effusion, most probably, into the Pericardium;—and that although it might not as yet have commenced, such a morbid state of the heart existed as would eventually, and, without proper precautions, speedily lead to it.

In addition to the medicines prescribed, I directed a nutritive, chiefly meat, diet, with a glass or two of old generous wine at dinner; exercise on horseback daily; diligent frictions to the whole body; in short such a plan of diet and regimen as was likely to give strength and tone to the habit, and to excite an active and vigorous absorption.—He was desired to refrain from malt liquors.

R. Decoct. Cinchonæ ℥vij.

Tinct. Card. C. ℥ss.

Sp. Ætheris Vitriolic ʒij. M.

Sumat Cochlear-ij. ampla mane et meridie
cum pilul. ij. infra Præscript.

R. Massæ Pilul. Scillæ
Myrrhæ sing. 3j.
Syr. Tolutan. q. s. ft. Pil. xxx.

The above plan of regimen and medicine was rigidly adhered to, and in his occasional visits to me the amendment in his health was very obvious. In the course of a few weeks he was so far recovered as to obtain my sanction to discontinue medicine; but was directed not to relax in the regimen; and if he should perceive any symptoms of a relapse, to apply for immediate advice.

Not many months had elapsed before his symptoms returned, with the addition of diminished secretion of high-coloured urine; increased difficulty in respiration, and inability of lying down in bed. The DIGITALIS was now prescribed with the happiest effects.

In March 1800, I had a letter from Mr. NEWELL, in which he observed,—“ Our friend CARR is finely ; I have lately experienced equally good effects in two cases “ similar to his.”—After this period I saw him occasionally ; he continued to have returns now and then, and the disorder seemed to have assumed more and more the character of Hydrops Pericardii ;—but the intervals were longer, and the DIGITALIS never failed to remove them ; so that for several years prior to his death he continued to enjoy tolerable health ; to use regular exercise ; and to make excursions on horseback, to visit his friends in the country.—The latter end of 1806 I last saw him, after an attack of Hemiplegia ; and on the 21st of December he died of exhausted constitution, the consequences, it might fairly be said, of a different disease, in the 75th year of his age.

CASE 9.

On the 28th of February, 1805, I was desired to visit Mrs. FISHER, of Colchester.—

She was about 65 years of age ; of a dark complexion, very fat and corpulent ; had lived a sedentary life for several years, and been confined to her chamber for some weeks. The leading symptoms were—extreme Dyspnœa, increased on the slightest motion, or attempt to lie down ; a cough ; considerable anasarous swellings of the whole body, the face, neck, and hands being œdematous ; urine very small in quantity, of a dark brown colour, with little sediment ; bowels costive ; no thirst ; appetite impaired ; pulse 80 and full, but laboured ; countenance of a dark livid hue, expressive of great anxiety and suffering ; conjunctiva of a yellowish cast ; constant drowsiness, but never enjoyed natural rest, her sleeps being short, hurried, and often suddenly roused ; from a sense of suffocation, and great anxiety about the Præcordia : The fear of the return of this dreadful symptom contributed much to disturb her sleep. Having been unable to lie down in bed for some months, and chiefly confined to her chair, she suffered

much pain from the enormous size of the legs. The Abdomen contained much fluid.

She had been subject for years to difficulty in breathing, and cough, which for some months had become more constant and regular, so as to oblige her to lie with her shoulders high, and frequently to sit up in bed. At length her ankles and legs began to swell, and the urine to diminish in quantity.

She had been attended by a Physician who, I understood, regarded her case as Asthma, and prescribed the common anti-spasmodic remedies, without relief. The case was considered as hopeless by the patient and her relatives. From the success I had experienced under circumstances apparently more unpromising, I held out a prospect of relief, provided the restrictions I should think it necessary to impose were rigidly complied with.

Quamprimum admoveatur Emplastr. Cantharidis satis amplum Pectori.

R. Calomelan. — Resin. Jallapii sing. gr. iij.
Crystallor. Tartar. Pulv. ʒj. simul in
pulverem tere et Syr. Zingiber. fiat
Bolus h. s. s. et pro re nata repet.

R. Infus. fol. DIGITALIS P. (ʒj. ad ʒvij.) ʒvj.
Tinct. Card. C. ʒj.
Spt. Æth. Nitros gtts. 50. M. ft. haust.
mane, meridie, et vespere sumend, in-
cipiens cras.

R. Calomel. — Scillæ Pulv. sing. gr. vj.
Crystallorum Tartari Pulv. ʒij. Syr.
Zingiber. q. s. ft. pil. xij.
sumat ij. singul. noct. h. s.

The body and legs were desired to be rubbed morning and evening with camphorated oil ; weak cold gin punch, acidulated with Crystals of Tartar, to be used freely for drink ; a glass or two of Madeira or Sherry. to be taken at dinner ; and the diet to consist of light, nutritive, chiefly animal, food. The usual directions were given to Mr. GRETEN, the Family Practitioner, to discontinue the Fox-GLOVE as soon as it should produce any effect

on the stomach, bowels, head, or pulse, altho' the urine should not be increased.

By perseverance in the above plan, the urine gradually increased in quantity, and assumed it's natural appearance; the swellings subsided; she was able to lie down in bed, and breathe with freedom in a recumbent posture; all the alarming symptoms vanished, and in the course of a few weeks she was restored to her ordinary state of health, and has remained free from the dropsical symptoms ever since.

The progress was at first very slow, which was to be attributed to the small quantity of liquid used, under the erroneous idea, which is too often encouraged by the Practitioner, that as she voided little urine, it must necessarily accumulate; and to the medicines having been taken very irregularly.

The Calomel was continued until the gums were affected; to which, with the combina-

tion of Squills, and Crystals of Tartar, aided by the free use of diluents, the cure is principally to be attributed.

I have seen this patient several times since, and prescribed for her once under a severe cough, but the dropsical symptoms did not return ; and her son informed me lately, she continued in tolerable health.

CASE 10.

Early on the morning of the 17th of June last, my immediate attendance was desired on the Rev. Mr. — of — near Harwich. His age 51, of tall stature; naturally robust and muscular, but of late years disposed to corpulency. His symptoms were—extreme difficulty in respiration, which has for some weeks prevented him from lying down in bed, or from walking but with great deliberation : When going up stairs, has been obliged to rest some minutes to take breath, before he reached his chamber ; and although propped up by pillows, nearly in a sitting posture, in bed, he

is suddenly roused from sleep by a sense of suffocation, and extreme anxiety about the Præcordia, which obliges him to get up and walk about the room; of late this has happened three or four times every night; urine very scanty, of a dark red colour, with very little sediment; pulse extremely irregular and intermitting; legs œdematous up to the knees, and readily pitting on pressure; tongue foul, with great thirst; no appetite; bodily strength much impaired; face and conjunctiva of a deep yellow tinge; and he brought up some yellow bile this morning. Bowels costive; memory much impaired, with giddiness of the head and confusion of ideas at times; constant drowsiness, amounting sometimes to stupor; hands and feet cold.—Has not been addicted to intemperance in the use of intoxicating liquors, but in the habit of indulging very freely in large draughts of beer, both at meals, and at all times when heated by exercise.—Has used much bodily exercise till of late years; has lived a sedentary and studious life.

For nine years has been subject to a peculiar uneasy sensation in the lower part of the Abdomen, from the Umbilicus to the Pubes, for which he has been in the constant habit of using active purgatives three or four times a week, as the only means which, he fancied, relieved him.

About two years since, when stooping to measure timber, was seized with a giddiness of the head, for which he went to town, and put himself under the care of an eminent Physician. It was treated as an attack of Apoplexy, for which copious V. S. and cupping were frequently used. He returned to the country much reduced in flesh and strength.

The first symptom of his present complaint was perceived in February, 1806, when he was suddenly roused from sleep, and thought himself in the act of dying. He had another attack when doing duty some months afterwards, and a third in December following: the pulse intermitted each time; it recovered

it's former regularity after the first and second attacks, but has been more or less irregular since the third.

He has been attended by three Physicians of the first eminence in town, and by one in the country. Their attention appears to have been principally directed to the affection of the head, and to the peculiar sensation of the Abdomen, acknowledging they could do nothing for the affection of the chest. The result of a consultation held by two of them in town, in April last, was the recommendation of a seton in the neck, and mild inert palliative medicines. On the suggestion of Mr. NUNN, of Manningtree, the DIGITALIS was once prescribed by one of them, but soon abandoned.

On the presumption that his complaints originated from water in the chest, Mr. NUNN, and Mr. SILK his partner, who constantly attended, prescribed the DIGITALIS in January and March last, with sensible advantage; as the pulse recovered it's natural regu-

larity both times : and Mr. NUNN reminding me of a case, apparently as hopeless as the present, in which I recommended the FOX-GLOVE, with him, with complete success, lamented that the prejudice against it here was so strong, that he was precluded from prescribing it again.

On assuring the patient and his family, that the medicines I should recommend would produce no violent or unpleasant effects, they left me to proceed as I should judge fit, unfettered by any restrictions. Had a blister applied to the chest, and a Calomel and Squill Bolus last night, which were the means of procuring some disturbed sleep.

R. Calomel. gr. vj. — Kali Vitrolat.

Myrrhæ — Aloes sing. gr. x.

tere simul. et Confect. Aromatic. q. s.

ft. Pil. viii. — sumat ij. statim et repr.
pro rê natâ.

R. Calomelan gr. jss. — Scillæ Pulv. gr. j.

Crystallor. Tartar. Pulv. ʒj — Confect.

Aromat. q. s. ft. Bolus sing. noctibus s.

R. Infus. DIGITAL. PUR. (3jss. ad 3viij.) 3vj.

Sp. Ætheris Nitrosi 3ss.—Tinct. Cort.

Aurant 3j.—Kali pp. gr. x.—Olei

Menthæ Piperit. gt. j. M.

ft. Haust. mane, meridiæ, et vespere, per dies tres, vel quatuor s.

He was directed to refrain from beer; but to drink freely of negus or gin-punch, acidulated with Crystals of Tartar; to have a few glasses of Madeira daily; and when his appetite returned, to have solid nutritive food, instead of the slops to which he had been accustomed. Mr. NUNN was requested not to continue the DIGITALIS beyond the third day, if it should occasion the slightest nausea or unpleasant effect; and to substitute the Infus. Gent. C. for it; at all events not to persevere in it after the fourth day, having appointed to see him on the fifth.

June 22d :—From voiding only half a pint of urine daily for some time prior to my first visit, he passed, by measure, five pints every

day after the first 24 hours, with proportionable relief of every symptom. For two days had been able to lie down in bed, and enjoyed sound, uninterrupted, refreshing sleep: swellings of the legs gone; appetite and strength returning; was able to walk without assistance an hour and a half yesterday in his garden. Has had occasion to use the Pills only once, the Boluses having procured two motions daily without griping. No sickness or any unpleasant symptom from the FOXGLOVE. Took one draught to-day with the Infus. Gent. C.

Pergat in usu Haust. cum Infus. Gentian C.
vice Infus. fol. DIGITALIS.

Repr. Boli singulis noct. h. s.

June 29:—By previous appointment came 12 miles to meet me: Has continued to mend; rides out every day in an open chaise, and drives himself; appetite too keen, and he has indulged too freely, especially at night; in consequence of which his stomach was disordered one night; and he has complained of giddiness and confusion of ideas at times.

Applr. Empl. Canth. Nuchæ.

R. Infus. Gent. C. ʒjx.—Tinet. Cort. Aur.

ʒj.—Acidi Nitrosi gt. jv. ad vj. M. ft.

Haust. cum Pilul. olim Præs. No. ij. s.

Repr. Boli ut antea.

July 8:—Came 17 miles to meet me, as previously agreed upon, and drove himself; continues to improve progressively; appetite more natural; and digestion good; head much relieved by the blister; has transacted business, and written letters, which required mental exertion. Walked up a hill yesterday a mile from home, and back again without inconvenience. Has recovered his natural florid complexion. Medicines to be continued, the draughts twice a day only.

July 22d:—Came as before to meet me. The day being excessively sultry, and being exposed for near four hours to an intense Sun, I was surprised to find him very little affected by the heat.—On the 13th he complained of great pain in the lower part of the Abdomen,

and in the course of the evening had three motions, consisting chiefly of dark grumous blood and a glutinous-like substance; the last without any fæculent matter. He mentioned with much satisfaction, that he has been since free from this painful complaint, which had more or less constantly harrassed him for nine years; and that for three nights the bowels performed their functions regularly without any assistance.—The gums being slightly affected, directed the Boluses to be taken only occasionally. Having been formerly recommended the shower bath, I permitted him to try it (especially as the weather had been intensely hot) every other morning. Acknowledges himself very much improved in every respect, and talks of making an excursion to Westmoreland in an open carriage. Was desired to go on as before*.

* A case in many respects similar to this interesting example of the efficacy of DIGITALIS, and of the neglect of it's powers, unfortunately too common, has lately been reported to me.—A Gentleman labouring under symptoms denoting an extraordinary affection of the lungs, which

Many comments might be made on this case, but I shall refrain from offering any, having already extended this letter, and trespassed on your time, far beyond my original intention.

A patient of mine fell under the care of a Professor of a celebrated English University, a few years since: When informed that she had been cured some months before by the DIGI-

balled the skill of his ordinary Medical Attendants, summoned no less than five distinguished Physicians to his aid, and as many distinct opinions were given upon his case, which is said not to be very uncommon on such occasions; fortunately for the patient, one of these supposed the possibility of the effusion of water into some of the cavities of the chest, and suggested the use of DIGITALIS; but this view of the case was opposed on all hands.—When, however, it was found that every other mean of relief had failed, and that he was drawing towards an end of all his sufferings, the FOXGLOVE was resorted to, as the least of two evils.—The consequences were speedy, but not fatal; in a few days this Gentleman astonished his friends by making his appearance in the upper room of the Exhibition at Somerset-house. But this exertion was imprudent, and he was seized in consequence of it with a severe paroxysm of difficult breathing; he, however, soon recovered again by the same plan, and is now, I understand, in very tolerable health.

W. H,

TALIS in combination with other remedies, he observed, " He never prescribed such deleterious drugs; that he once ordered it, " and that it killed his patient !"

I confidently look forward to the period when this valuable medicine will completely triumph over the obstacles which prejudice and ignorance have hitherto opposed to its progress; and doubt not but your work will contribute to the attainment of this desirable object. You know my sentiments of it; and you know what I have done with it, as well as my intentions, which, *deó volenté*, I trust may be accomplished ere many months elapse. — Sincerely wishing you success in all your undertakings, believe me to be

Very faithfully and truly your's,

L. MACLEAN.

Dr. Hamilton.



§ The Reader is requested to correct the following ERRATA:

In page 7, line 5 of the Note—for sceptism, read scepticism.

Page 15, line 8—for means, read mean.

— 21, — 1—for Fuchius, read Fuschius.

— 27, — 11—for appear, read appeared.

— 42, — 3—for George, read James.

— 123, — 5—for ever, read never.

85

